Zoosyst. Evol. 101 (4) 2025, 2065–2101 | DOI 10.3897/zse.101.160146

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Taxonomy of the *Strigamia* centipedes from the East Asian mainland (Geophilomorpha, Geophilidae)

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Academic editor: Danilo Harms ♦ **Received** 25 May 2025 ♦ **Accepted** 9 October 2025 ♦ **Published** 30 October 2025

Abstract

In this study, 15 centipede species of the genus *Strigamia* Gray, 1843 were recorded from the East Asian mainland, including 7 newly discovered species: *S. asiatica* Jiang & Yu, **sp. nov.,** *S. dianguiensis* Jiang & Yu, **sp. nov.**, *S. laterisetosa* Jiang & Yu, **sp. nov.**, *S. longiglanda* Jiang & Yu, **sp. nov.**, *S. obliquidentata* Jiang & Yu, **sp. nov.**, *S. xizangensis* Jiang & Yu, **sp. nov.** and *S. ziyunensis* Jiang & Yu, **sp. nov.** *Strigamia monoporus* (Takakuwa, 1938) was proposed as a *nomen dubium* because it was likely derived from immature specimens and lacked sufficient diagnostic information. A key to *Strigamia* species from the East Asian mainland is provided.

Key Words

Chilopoda, distribution, morphology, new species, taxonomic key

Introduction

Geophilomorpha is the most diverse order of centipedes at the familial level, comprising 7 families, approximately 236 genera, and over 1000 species (Edgecombe and Giribet 2007; Bonato et al. 2014). They are characterised by a distinctly narrow and elongated body that typically exhibits a yellow-brown colouration. Adults range in length from approximately 1 to 22 cm and possess 27–191 pairs of legs. Its distribution is nearly global, except Antarctica and most of the Arctic region (Bonato et al. 2011).

The genus *Strigamia* Gray, 1843, represents a monophyletic and ecologically dominant lineage of soil centipedes, comprising 47 valid species with a Holarctic distribution that extend into the Indochinese sub-region (Bonato et al. 2011, 2012). Despite recent taxonomic revisions and descriptions of novel taxa (Bonato et al. 2012, 2017), the diversity and biogeography of this genus remain poorly documented across Asia, particularly on the East Asian mainland. The term "East Asian mainland" in this context is confined to the continental mainland and its adjacent peninsulas, excluding the Russian Far East and independent islands such as the Japanese archipelago, Taiwan island, Hainan island, etc. Prior to this study, six species of the genus *Strigamia* had been recorded from the East Asian mainland: *S. svenhedini* (Verhoeff, 1933) was first described from southern Gansu, China (Verhoeff 1933; Bonato et al. 2012); *S. pusilla* (Sseliwanoff, 1884) was reported from Mongolia (Dobroruka 1960); *S. alokosternum* (Attems, 1927) was reported from North Korea (Bonato et al. 2012); *S. japonica* (Verhoeff, 1935) was recorded in North Korea (Takakuwa 1938, 1940; Bonato et al. 2012); *S. tenuiungulata* (Takakuwa, 1938) was found in both North and South Korea (Bonato et al. 2012); and *S. bicolor* Shinohara, 1981 was documented in North Korea (Bonato et al. 2012).

This study synthesises the extant records of *Strigamia* from the East Asian mainland and provides formal descriptions of seven newly discovered taxa, supplemented with detailed morphological illustrations. Diagnostic

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comparisons between these new species and their previously documented congeners are also presented. Our findings contribute to our understanding of the richness and biogeographic patterns of this genus in East Asia.

Materials and methods

Samples were collected from China between 2019 and 2024 by sifting through rocks, leaf litter, and soil with tweezers, and were preserved in 75% ethanol. Specimens have been deposited at the National Resource Center for Chinese Materia Medica, China Academy of Chinese Medical Sciences, Beijing, China (**CMMI**).

We examined 70 specimens belonging to 13 species in detail. Morphological terminology for external anatomy follows that of Bonato et al. (2010). Specimens were dissected and their cephalic plates, mandibles and maxillary complexes were mounted on temporary slides using 75% ethanol or lactic acid. Taxonomic characteristics were examined in lactic acid and photographed using a Leica M205 FCA stereomicroscope equipped with a Leica DMC 6200 camera. The photos were converted into hand-drawn illustrations with SKETCHBOOK 6.0.6. Localities of the specimens were mapped using ArcMap 10.7.1. The species are listed in the following order: (1) original description year from far to near, and (2) initial letters from A to Z. Only records from the East Asian mainland are considered for the distributions reported here.

Results

Taxonomy

Order Geophilomorpha Pocock, 1895
Family Geophilidae, Leach, 1815
Subfamily Linotaeniinae Cook, 1899

Genus *Strigamia* Gray, 1843

Type species. *Strigamia fulva* Sager, 1856, by monotypy.

Diagnosis. See Bonato et al. (2012).

Strigamia pusilla (Sseliwanoff, 1884)

Scolioplanes pusilla Sseliwanoff, 1884: 92.

Strigamia pusilla: Bonato et al. 2012: 21; Dányi 2006: 44, figs 1a–f; Dobroruka 1960: 17.

Material examined. None.

Diagnosis. Body length reaching at least 13 mm; number of leg-bearing segments usually 33–37; cephalic capsule longer than wide or as long as wide; antennae short; tergites smooth; coxosternite of first maxillae with a median sulcus; metasternites with mid-longitudinal deep sulcus and two smaller lateral sulci (except ultimate metasternite); metasternite of ultimate leg-bearing segment elongated, narrowing dorsally; coxal pores at least 6 on each coxopleuron; sparse on the ventral surface but dense in lateral margin of the metasternite; anal pores distinct.

Remarks. As illustrated in fig. 1d in Dányi (2006), the coxosternite of the first maxillae in this species possesses a median sulcus, a feature not reported in the descriptions or illustrations of other species. Therefore, "coxosternite of first maxillae with a median sulcus" is the key diagnostic feature for this species.

Distribution. Mongolia.

Strigamia alokosternum (Attems, 1927)

Scolioplanes alokosternum: Takakuwa 1938: 243, fig 13; Takakuwa 1940: 128, figs 141, 142.

Strigamia alokosternum: Bonato et al. 2012: 21.

Material examined. None.

Diagnosis. Body length reaching 40 mm; number of leg-bearing segments usually 51–67; cephalic capsule as long as wide; denticle of the tarsungulum large and blunt, internal and external margins of the tarsungulum subparallel along the basal part, gradually converging only along the distal part; calyx of poison gland situated in the distal half of trochanteroprefemur; tergites smooth; metasternites with mid-longitudinal deep sulcus (except ultimate metasternite); pore-fields not on the anterior part; metasternites with sparse setae of various sizes, metasternite of ultimate leg-bearing segment as long as wide; the coxal pores reaching 20 on each coxopleuron, the most posterior coxal pore on each coxopleuron larger; ultimate legs of male distinctly swollen, ventral and lateral sides with very dense setae.

Remarks. The type localities of this species are "Yamanaka, Suruga" (Japan) and "Bukenji" (Japan).

Distribution. North Korea.

Strigamia svenhedini (Verhoeff, 1933)

Figs 1A, 2, 9J

Paraplanes svenhedini Verhoeff, 1933: 23, 24, figs 15, 16.

Strigamia svenhedini: Bonato et al. 2012: 19, figs 10, 15.

Material examined. China – **Chongqing** • 1♂ (CMMI 20250507013D), Wuxi County, Yintiaoling Nature Reserve, Linkouzi Protection Area, Heping (31.4747°N, 109.8646°E), 1290 m asl., 07.v.2025, leg. Yifei Yu; • 1♀ (CMMI 20250509003D), Wuxi County, Yintiaoling Nature Reserve, Hongqi Protection Area, Shuangtong Reservoir (31.3128°N, 109.4932°E), 1260 m asl., 9.v.2025, leg. Yutong Zhang & Hongyan Zhang. – **Gansu Province** • 1♀ (CMMI 20230921001D), Gannan Tibetan Autonomous Prefecture, Zhuoni County, Yeliguan National Forest Park (34.9587°N, 103.5565°E), 2390 m asl., 21.ix.2023, leg. Tianyun Chen, Jiabo Fan & Yiying Zhao; • 1♂ (CMMI 20220123108), Tianshui, Qingshui County, Shanmen

Town, 23.i.2022, leg. Quanyu Ji. – **Shaanxi Province** • 1♀ (CMMI 20230730002D), Mei County, Honghegu National Forest Park (34.0955°N, 107.7511°E), 1030 m asl., 30.vii.2023, leg. Tianyun Chen & Yuan Xiong. – **Sichuan Province** • 1♂ (CMMI 20210417118), Baoxing County, Fengtongzhai Town, Fengda Road (30.5341°N, 102.9410°E), 1810 m asl., 17.iv.2021, leg. Chao Jiang; • 1♂, 3♀♀ (CMMI 20230728001D–004D), Baoxing County, Mt. Jiajinshan (30.8670°N, 102.6787°E), 3890 m asl., 28.vii.2023, leg. Chao Jiang; • 2♂♂ (CMMI 20230804001D–002D), Aba Tibetan and Qiang Autonomous Prefecture, Songpan County, Zhenjiangguan Town (32.2961°N, 103.7264°E), 2440 m asl., 4.viii.2023, leg. Chao Jiang; • 1♀ (CMMI 20230804005D), Aba Tibetan and Qiang Autonomous Prefecture, Heishui County, Luhua Town (32.1026°N, 102.9643°E), 2360 m asl., 4.viii.2023, leg. Chao Jiang; • 1♂ (CMMI 20230730001D), Garzê Tibetan Autonomous Prefecture, Kangding County, Xinduqiao Town, Mt. Yala (30.2838°N, 101.8379°E), 3210 m asl., 30.vii.2023, leg. Chao Jiang; • 3♀♀ (CMMI 20230731001D–003D), Garzê Tibetan Autonomous Prefecture, Luhuo County, Xindu Town, near the junction of Niqu, Daqu, and Xianshuihe River (31.4081°N, 100.6863°E), 3120 m asl., 31.vii.2023, leg. Chao Jiang; • 1♀ (CMMI 20220903003), Aba Tibetan and Qiang Autonomous Prefecture, Songpan County, Baiyang Provincial Nature Reserve (32.4790°N, 103.6904°E), 2790 m asl., 3.ix.2022, leg. Chao Jiang; • 3♀♀ (CMMI 20210901003, 20210901005–006), Aba Tibetan and Qiang Autonomous Prefecture, Songpan County, Hongxingyan (32.8668°N, 103.8123°E), 3750 m asl., 1.ix.2021, leg. Chao Jiang; • 1♂ (CMMI 20220903086), Aba Tibetan and Qiang Autonomous Prefecture, Songpan County, Daxing Town, near dazhaizi (32.5208°N, 103.6878°E), 2940 m asl., 3.ix.2022, leg. Chao Jiang. – **Yunnan Province** • 1♀ (CMMI 20201023144), Kunming, Xishan Dist., Longmen Scenic Area (24.9608°N, 102.6346°E), 2130 m asl., 23.x.2020, leg. Chao Jiang & Zhidong Wang.

Diagnosis. Body length reaching at least 10 mm; number of leg-bearing segments usually 33–59; with transverse suture on the cephalic plate; cephalic pleurite without setae; with 32 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular, internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 1.4 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 10 on each coxopleuron; the most posterior coxal pore on each coxopleuron distinctly displaced from all other pores.

Description. ***General features.*** Body 10–53 mm long; with 33–59 leg-bearing segments; narrowing forward and towards the posterior tip. Color (in ethanol 75%) reddish yellow; forcipules darker.

Cephalic capsule (Fig. 2A, C) sub-quadratic; *ca.* 1.2 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 1 medial prelabral seta on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 2B) almost uniform in width; *ca.* 3.0 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 0.9 times as long as wide); distal articles stouter (article XIII *ca.* 0.8 times as long as wide); article XIV *ca.* 1.9 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with distinctly two whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 2D) with a single pectinate lamella with *ca.* 32 hyaline teeth.

First maxillae (Fig. 2E). Coxosternite entire; uniformly areolate; without lappets; 2+2 setae on anterior middle part. Coxal projection sub-triangular; about as wide as long; ventral side with 5 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 4+3 long setae and 5+3 short setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 2E). Coxosternite entire; uniformly areolate; anterior margin deeply concave, 3 + 4 setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 2F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 2.4 times as wide as long. Coxosternite *ca.* 2.0 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.2 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.0 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.4 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum

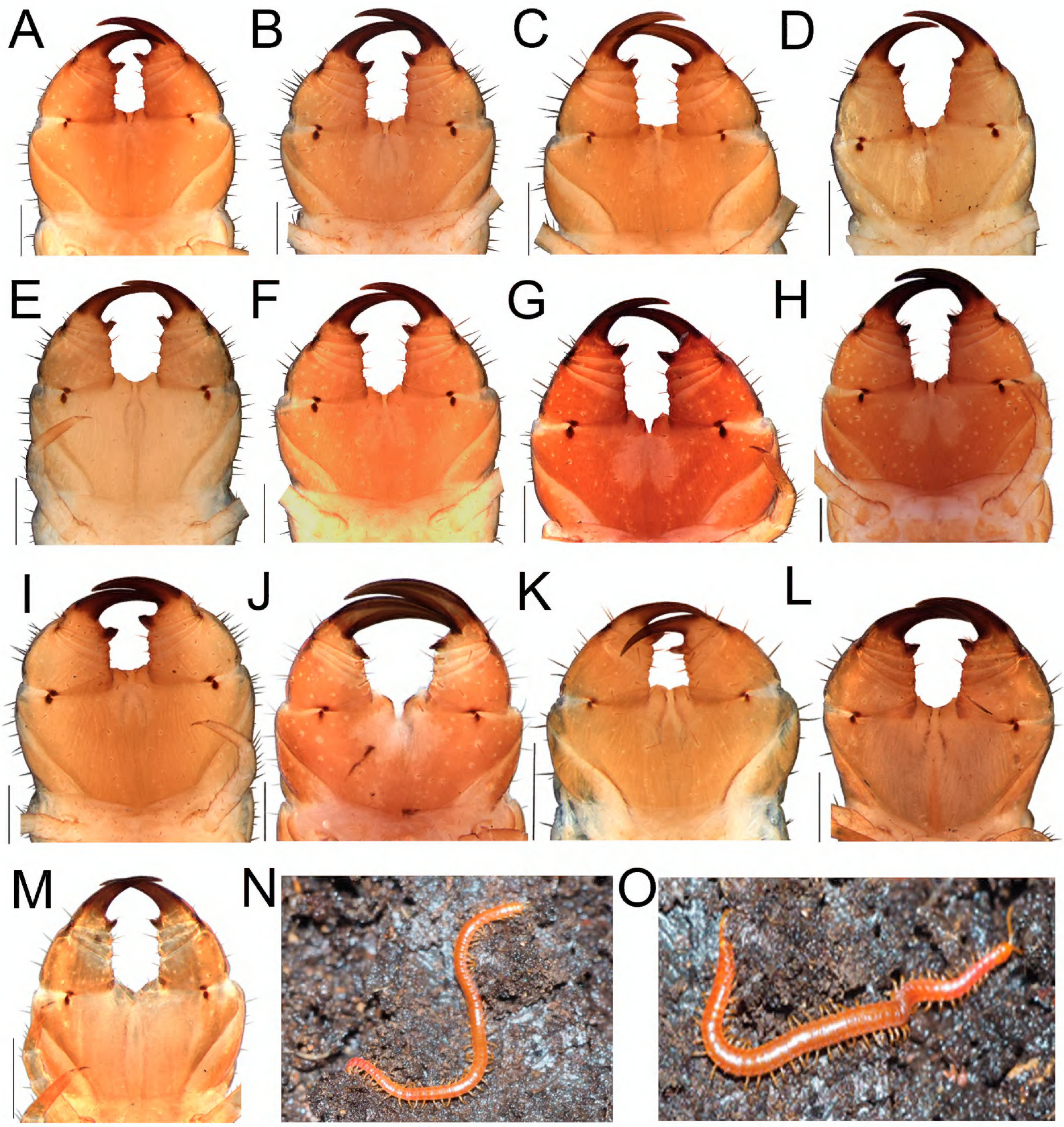

Figure 1. Forcipular segments of *Strigamia* spp. (**A–M**). **A.** *S. svenhedini* (Verhoeff, 1933) (spm. CMMI 20220903086); **B.** *S. japonica* (Verhoeff, 1935) (spm. CMMI 20231128001D); **C.** *S. tenuiungulata* (Takakuwa, 1938) (spm. CMMI 20230414002D); **D.** *S. bicolor* Shinohara, 1981 (spm. CMMI 20210227106); **E.** *S. platydentata* Shinohara, 1981 (spm. CMMI 20210702003D); **F.** *S. korsosi* Bonato, Bortolin, Drago, Orlando, Dányi, 2017 (spm. CMMI 20191031044); **G.** *S. laterisetosa* sp. nov., holotype; **H.** *S. longiglanda* sp. nov., holotype; **I.** *S. dianguiensis* sp. nov., holotype; **J.** *S. obliquidentata* sp. nov., holotype; **K.** *S. xizangensis* sp. nov., paratype; **L.** *S. ziyunensis* sp. nov., holotype; **M.** *S. asiatica* sp. nov., holotype. **N, O.** live specimens of *S. laterisetosa* (Zhoushan, Zhejiang Province, China; photo by Chao Jiang). Scale bars: 250 μm (**A–M**).

uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 1.4 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 2G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with sparse setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 2H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 2.4 times as wide as long on exposed part. Metatergite

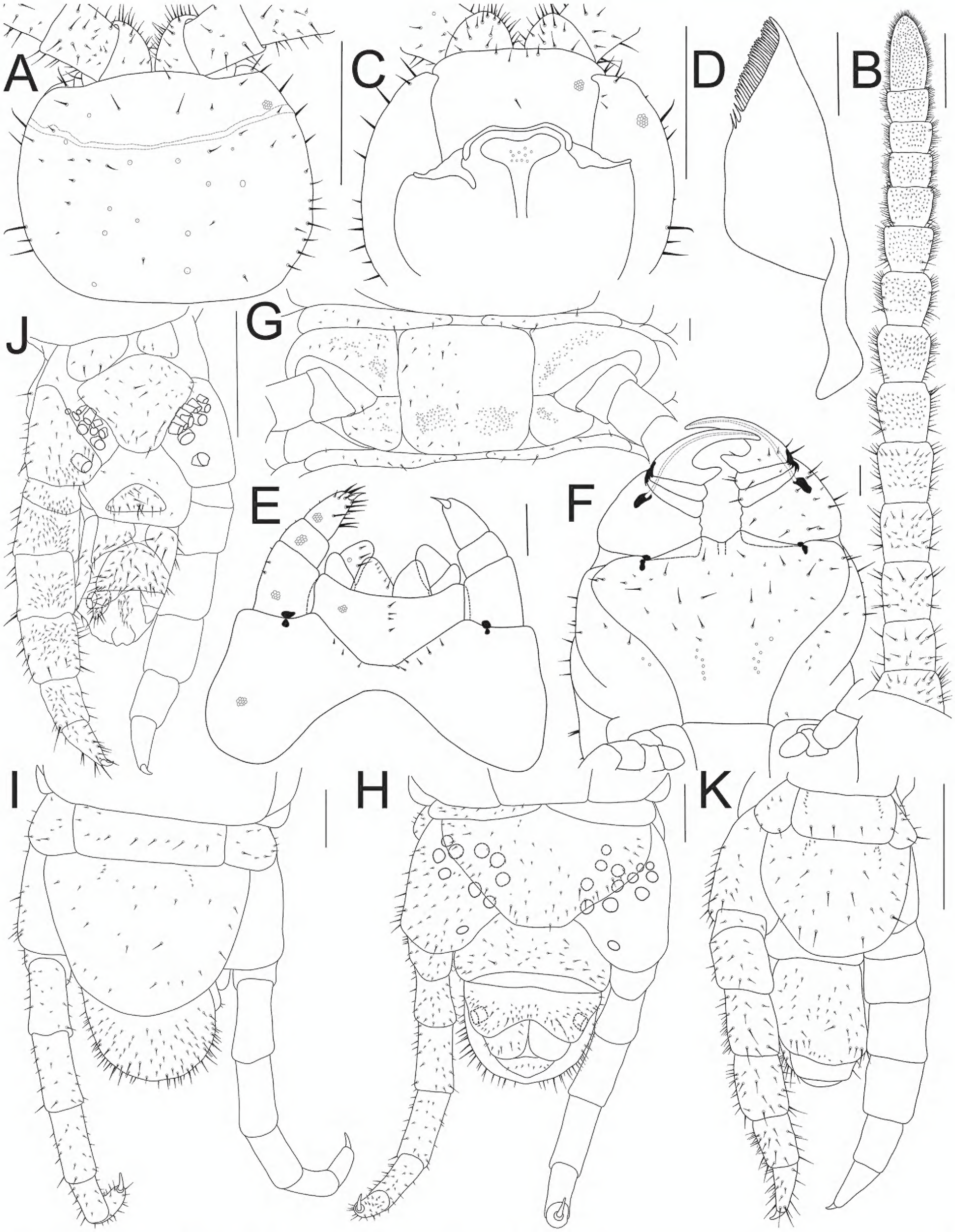

Figure 2. *Strigamia svenhedini* (Verhoeff, 1933). **A.** Cephalic plate, dorsal; **B.** Left antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal (setae on right coxopleuron and ultimate leg omitted); **J.** Posterior end of body in adult male, ventral (setae on left coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal (setae on right coxopleuron and ultimate leg omitted). Areolation drawn in part in **A, D, E**. Specimens: ♂ (CMMI 20230728002D) (**A–G, J–K**); ♀ (CMMI 20230731001D) (**H, I**). Scale bars: 100 µm (**D–G**); 250 µm (**B, H, I**); 500 µm (**A, C, J–K**).

ca. 1.2 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.8(♀), 1.3(♂) times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 10–13(♀), 10–11(♂) on each coxopleuron (16–17 coxal pores in Verhoeff, 1933); opening independently; all coxal pores distinctly aggregated close to the lateral margins of the metasternite with the possible exception of a single pore on each coxopleuron, diameter of the coxal pores similar to that of the respective ducts; male setae slightly denser close to the ventral posterior edge of the coxopleuron, female sparse. Ultimate leg *ca.* 1.2 times as long as penultimate leg, male distinctly swollen, ventral and lateral sides with very dense setae, female sparse. Ultimate pretarsus a claw; *ca.* 0.3(♂), 0.4(♀) times as long as tarsus.

Postpedal segments (Fig. 2H, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores present. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 2.6 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Remarks. Through detailed morphological comparisons of our specimens with published descriptions and illustrations (Verhoeff 1933: fig. 15; Bonato et al. 2012: figs 10, 15), we observed no significant differences in the following characteristics: coxal pore arrangement (one posterior pore distinctly separated from the others), shape of the ultimate sternite, and morphology of the forcipular segment. The ventral pore distribution deviated slightly from the illustrations (Verhoeff 1933: fig. 16) but aligned with the original textual descriptions.

This species is widely distributed across southeastern mainland Asia, from Central China to Indochina (Bonato et al. 2012). However, a record from Thailand (Bonato et al. 2014) was confirmed as a distinct species, *Strigamia inthanoni* Bonato, Bortolin, Drago, Orlando, Dányi, 2017, and was therefore removed from its distribution (Bonato et al. 2017). As the distribution of this species in China is mainly concentrated in the southwest and western regions, and it has not been recorded in other regions, the records from Taiwan may require further validation.

Distribution. China (Gansu, Guangxi, Shaanxi, and Sichuan Provinces, Chongqing).

Strigamia japonica (Verhoeff, 1935)

Figs 1B, 3

Scolioplanes maritimus japonicus: Takakuwa 1938: 242, figs 7–9; Takakuwa 1940: 125, figs 135–138, 140B.

Strigamia japonica: Bonato et al. 2012: 21, fig. 13.

Material examined. China – Guangxi Zhuang Autonomous Region • 1♀ (CMMI 20231128001D), Jinxiu County, Dayaoshan National Forestry Park, Changdong Tourist Lodge (24.0534°N, 110.1145°E), 650 m asl., 28.xi.2023, leg. Yuan Xiong & Jiabo Fan. – **Guizhou Province** • 1♂ (CMMI 20210603169), Qiannan Buyei and Miao Autonomous Prefecture, Duyun, Mt. Doupengshan (26.3749°N, 107.3691°E), 1070 m asl., 3.vi.2021, leg. Chao Jiang.

Diagnosis. Body length reaching at least 31 mm (40 mm long in Takakuwa, 1940); number of leg-bearing segments usually 49–51 (37♂–57♀ pairs of leg-bearing segments in Takakuwa, 1940); with transverse suture on the cephalic plate; cephalic pleurite with sparse setae; with 32 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite shallowly concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular, internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 1.8 times as long as wide, situated from femur to distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 16 on each coxopleuron; all sparse on the ventral surface of the coxopleuron, distinctly denser close to the lateral margin of the metasternite.

Description. ***General features.*** Body 31–32 mm long (40 mm long in Takakuwa, 1940); with 49–51 leg-bearing segments (37♂–57♀ pairs of leg-bearing segments in Takakuwa, 1940); narrowing forward and towards the posterior tip. Color (in ethanol 75%) reddish yellow; forcipules darker.

Cephalic capsule (Fig. 3A, C) sub-quadratic; *ca.* 1.1 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 1 medial prelabral seta on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 3B) almost uniform in width; *ca.* 4.1 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 0.8 times as long as wide); distal articles stouter (article XIII *ca.* 0.8 times as long as wide); article XIV *ca.* 1.6 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–VII with distinctly two whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 3D) with a single pectinate lamella with *ca.* 32 hyaline teeth.

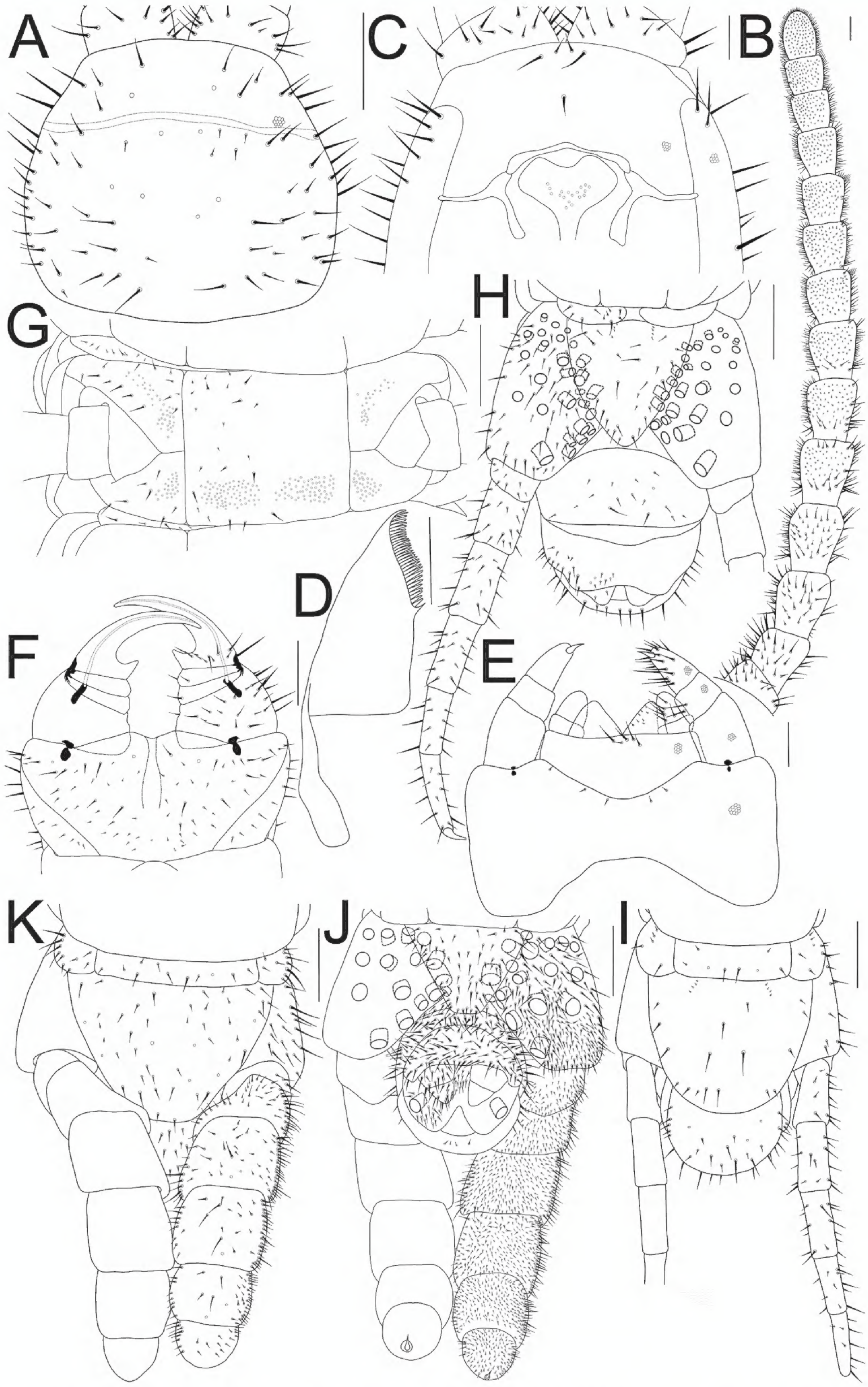

Figure 3. *Strigamia japonica* (Verhoeff, 1935). **A.** Cephalic plate, dorsal; **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal; **J.** Posterior end of body in adult male, ventral (setae on right coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal (setae on left coxopleuron and ultimate leg omitted). Areolation drawn in part in **A, D, E**. Specimens: ♂ (CMMI 20210603169) (**G, J–K**); ♀ (CMMI 20231128001D) (**A–F, H, I**). Scale bars: 100 μm (**B–E**); 250 μm (**A, F–K**).

First maxillae (Fig. 3E). Coxosternite entire; uniformly areolate; without lappets; 2+3 setae on anterior middle part. Coxal projection sub-triangular, wider than long; ventral side with 7+8 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 7+7 long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 3E). Coxosternite entire; uniformly areolate; anterior margin shallowly concave, 3+2 setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 3F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 2.8 times as wide as long. Coxosternite *ca.* 2.1 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.3times as wide as long; basal distance between trochanteroprefemora *ca.* 0.5 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.4 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.4 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 3.0 times as long as wide, situated from femur to distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 3G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with sparse setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/4 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 3H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 3.5 times as wide as long on exposed part. Metatergite *ca.* 1.3–1.5 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.1–1.4 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.2 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 27 (♀), 16–18(♂) on each coxopleuron (10–20 coxal pores in Takakuwa, 1940); opening independently; all sparse on the ventral surface but densely in lateral margin of the metasternite and some of them covered by that; diameter of the coxal pores similar to that of the respective ducts; male setae slightly denser close to the ventral posterior edge of the coxopleuron, female sparse. Ultimate leg *ca.* 0.9 times as long as penultimate leg, distinctly swollen, with very dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.4 times as long as tarsus.

Postpedal segments (Fig. 3H, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores present. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 1.7 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Remarks. This species was previously treated as a subspecies of *Scolioplanes maritimus*, but was subsequently elevated to full species status as *S. japonica* (Bonato et al. 2012). It is morphologically similar to *S. bicolor* Shinohara, 1981 and *S. tenuiungulata* (Takakuwa, 1938), but distinguished from the former by the colouration of the forcipular tarsungulum and the first leg-bearing segment, and the morphological characteristics of coxal pores, and from the latter by the setae density and morphological characteristics of the forcipular tarsungulum. *Strigamia tenuiungulata* (Takakuwa, 1938) differs by its denser setation and the internal and external margins of the forcipular tarsungulum subparallel to the basal part, gradually converging only along the distal part (Takakuwa 1938). *Strigamia bicolor* Shinohara, 1981 differs in that it has fewer coxal pores (fewer than 10) and occasional discolouration or whitening of the first pair of legs and forcipular tarsungulum (Shinohara 1981). These features clearly distinguish *S. japonica* (Verhoeff, 1935) from its congeners. In addition, the coxal pore number and arrangement of this species resemble those of *Strigamia nana* Bonato, Bortolin, Drago, Orlando, Dányi, 2017.

Distribution. China (Guangxi Zhuang Autonomous Region, and Guizhou Province); North Korea.

Strigamia tenuiungulata (Takakuwa, 1938)

Figs 1C, 4

Scolioplanes tenuiungulata Takakuwa, 1938: 236, 244, figs 14, 15; Takakuwa 1940: 129–130, fig. 143.

Strigamia tenuiungulata: Bonato et al. 2012: 19.

Material examined. **China – Sichuan Province** • 1♀ (CMMI 20230414002D), Baoxing County, Dengchigou (30.5357°N, 102.9413°E), 1900 m asl., 14.iv.2023, leg. Chao Jiang.

Diagnosis. Body length reaching at least 30 mm; number of leg-bearing segments usually 41 (43♂–45♀ pairs of leg-bearing segments in Takakuwa, 1938); with transverse suture on the cephalic plate; cephalic pleurite without setae; with 31 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum slender, sub-triangular, internal and external margins of

the tarsungulum subparallel along the basal part, gradually converging only along the distal part; calyx of poison gland *ca.* 1.0 times as long as wide, situated from femur to distal half of trochanteroprefemur; metasternites with dense setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 8 on each coxopleuron; all sparse on the ventral surface of the coxopleuron, distinctly denser close to the lateral margin of the metasternite.

Description. ***General features.*** Body 30 mm long; with 41 leg-bearing segments (43♂–45♀ pairs of leg-bearing segments in Takakuwa, 1938); narrowing forward and towards the posterior tip. Color (in ethanol 75%) reddish yellow; forcipules darker.

Cephalic capsule (Fig. 4A, C) sub-quadratic; *ca.* 1.0 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2 medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 4B) almost uniform in width; *ca.* 3.0 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 1.3 times as long as wide); distal articles stouter (article XIII *ca.* 1.0 times as long as wide); article XIV *ca.* 1.7 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–XI with distinctly three whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 4D) with a single pectinate lamella with *ca.* 31 hyaline teeth.

First maxillae (Fig. 4E). Coxosternite entire; uniformly areolate; without lappets; setae on anterior middle part indistinct. Coxal projection sub-triangular; about as wide as long; ventral side with 4 setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 3+2 long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 4E). Coxosternite entire; uniformly areolate; anterior margin deeply concave, 3+2 setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 4F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 3.0 times as wide as long. Coxosternite *ca.* 2.2 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.5 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.5 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.7 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.3 times as long as the basal breadth of the tarsungulum; internal and external margins of the tarsungulum subparallel along the basal part, gradually converging only along the distal part. Calyx of poison gland *ca.* 1.0 times as long as wide, situated from femur to distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 4G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with dense setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 4H, I). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 4.0 times as wide as long on exposed part. Metatergite *ca.* 1.4 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.1 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.4 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 8–9 on each coxopleuron (10 coxal pores in Takakuwa, 1938); opening independently; all sparse on the ventral surface but densely in lateral margin of the metasternite and some of them covered by that; diameter of the coxal pores similar to that of the respective ducts; setae slightly denser close to the ventral posterior edge of the coxopleuron. Ultimate leg *ca.* 0.8 times as long as penultimate leg, distinctly swollen, with dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.4 times as long as tarsus.

Postpedal segments (Fig. 4H). Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 1.8 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Remarks. *S. tenuiungulata* is morphologically similar to *S. bicolor* Shinohara, 1981, but could differ in its long and numerous setae, and the internal and external margins of the forcipular tarsungulum being subparallel along the basal part, gradually converging only along the distal part, and the small and pointed basal denticle of the forcipular tarsungulum.

Distribution. China (Sichuan Province); North Korea; South Korea.

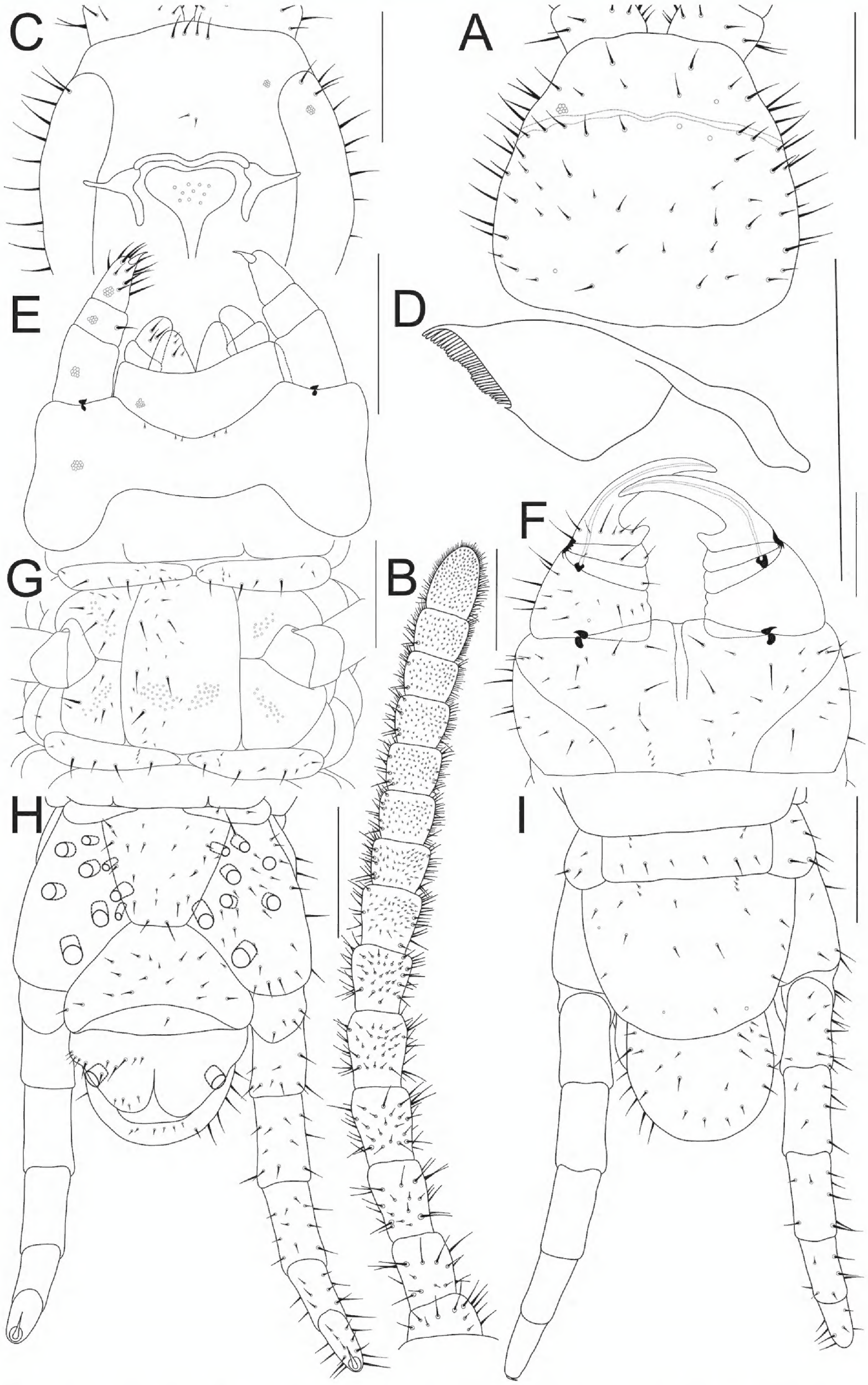

Figure 4. *Strigamia tenuiungulata* (Takakuwa, 1938). **A.** Cephalic plate, dorsal (most part of antennae, legs omitted); **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on right coxopleuron and ultimate leg omitted omitted); **I.** ditto, dorsal (setae on left coxopleuron and ultimate leg omitted omitted). Areolation drawn in part in **A, C, E**. Specimen: ♀ (CMMI 20230414002D). Scale bars: 250 μm.

Strigamia bicolor Shinohara, 1981

Figs 1D, 5

Strigamia bicolor Shinohara, 1981: 45, figs 7–14; Bonato et al. 2012: 21, fig. 6.

Material examined. China – Guangdong Province • 1♀ (CMMI 20210227106), Foshan, Nanhai Dist., Xiqiaoshan Scenic Area (22.9411°N, 112.9781°E), 70 m asl., 27.ii.2021, leg. Tianyun Chen.

Diagnosis. Body length reaching at least 25 mm (up to 35 mm long in Shinohara, 1981); number of leg-bearing segments usually 45 (47–49 pairs of leg-bearing segments in Shinohara, 1981); with transverse suture on the cephalic plate; cephalic pleurite without setae; with 24 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular, internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 1.3 times as long as wide, situated from femur to distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 12 on each coxopleuron; all sparse on the ventral surface of the coxopleuron, distinctly denser close to the lateral margin of the metasternite.

Description. ***General features.*** Body 25 mm long (up to 35 mm long in Shinohara, 1981); with 45 leg-bearing segments (47–49 pairs of leg-bearing segments in Shinohara, 1981); narrowing forward and towards the posterior tip. Color (in ethanol 75%) shallow orange or reddish yellow; forcipules darker.

Cephalic capsule (Fig. 5A, C) sub-quadratic; *ca.* 1.2 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2 medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 5B) almost uniform in width; *ca.* 2.2 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 1.3 times as long as wide); distal articles stouter (article XIII *ca.* 0.7 times as long as wide); article XIV *ca.* 1.3 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with distinctly two whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 5D) with a single pectinate lamella with *ca.* 24 hyaline teeth.

First maxillae (Fig. 5E). Coxosternite entire; uniformly areolate; without lappets; setae on anterior middle part indistinct. Coxal projection sub-triangular; about as wide as long; ventral side with 5 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 4+2 long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 5E). Coxosternite entire; uniformly areolate; anterior margin deeply concave, setae on anterior middle part indistinct. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 5F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 3.1 times as wide as long. Coxosternite *ca.* 2.0 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.3 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.1 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.4 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 1.3 times as long as wide, situated from femur to distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 5G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with sparse setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 5H, I). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 4.2 times as wide as long on exposed part. Metatergite *ca.* 1.3 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.2 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.4 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 12–13 on each coxopleuron (5–8 coxal pores in Shinohara, 1981); opening independently; all sparse on the ventral surface but densely in lateral margin of the metasternite and some of them covered by that; di-

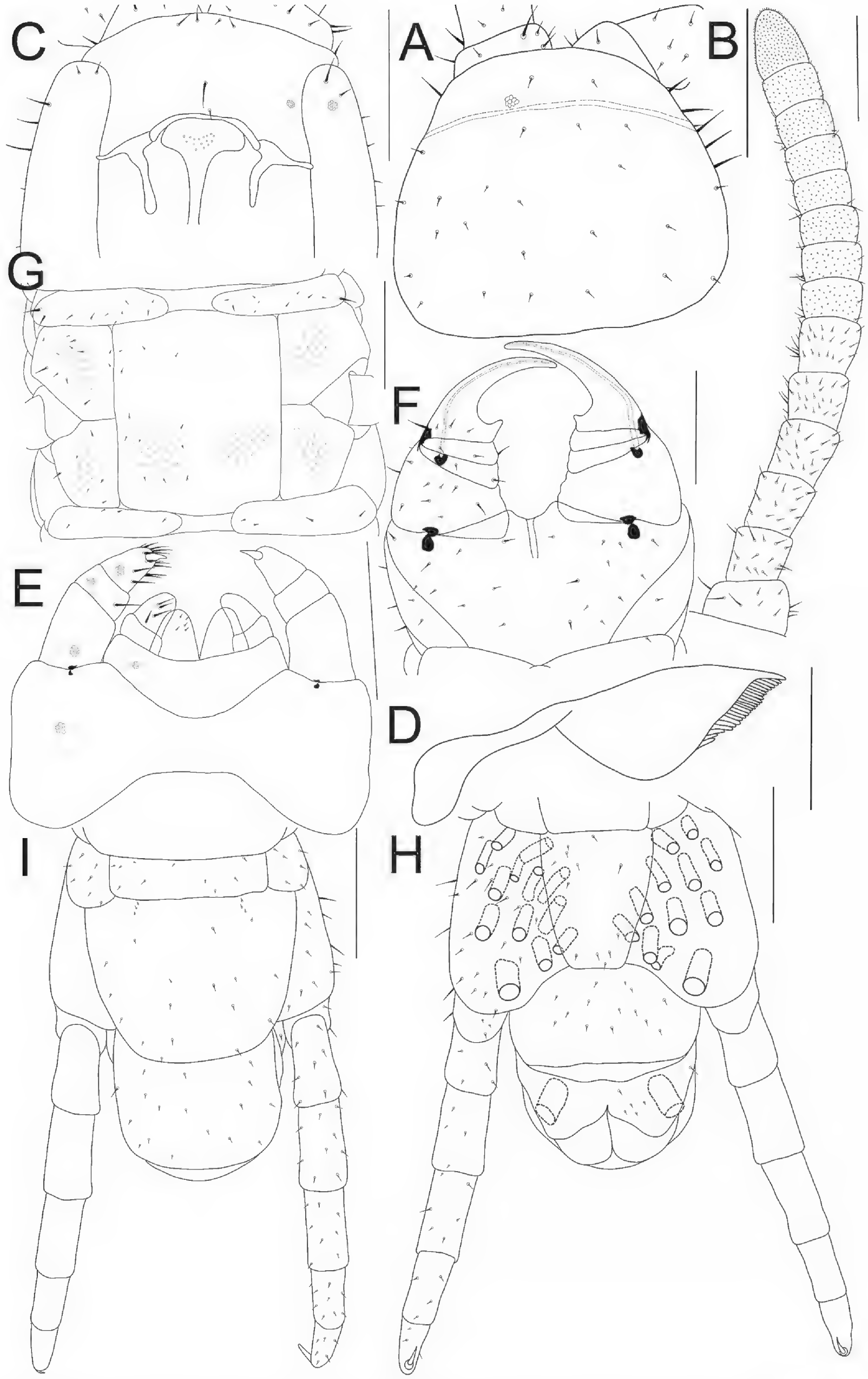

Figure 5. *Strigamia bicolor* Shinohara, 1981. **A.** Cephalic plate, dorsal (most part of antennae, legs omitted); **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on left coxopleuron and ultimate leg omitted omitted); **I.** Ditto, dorsal. Areolation drawn in part in **A, C, E**. Specimen: ♀ (CMMI 20210227106). Scale bars: 100 μm (**D**); 250 μm (**A–C, E–I**).

ameter of the coxal pores similar to that of the respective ducts; setae slightly denser close to the ventral posterior edge of the coxopleuron. Ultimate leg *ca.* 0.9 times as long as penultimate leg, distinctly swollen, with very dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.3 times as long as tarsus.

Postpedal segments (Fig. 5H). Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 2.1 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Remarks. *S. bicolor* is characterised by a discoloured forcipular tarsungulum and the first leg-bearing segment (Shinohara 1981), which is a unique characteristic among known *Strigamia* species.

Distribution. China (Guangdong Province); North Korea.

Strigamia platydentata Shinohara, 1981

Figs 1E, 6

Strigamia platydentata Shinohara, 1981: 43, figs 1–6; Bonato et al. 2012: 17.

Material examined. **China – Henan Province** • 1♂, 2♀♀ (CMMI 20210702001D–003D), Luoyang, 2.vii.2021, leg. Junduo Zhang.

Diagnosis. Body length reaching at least 42 mm (15–22 mm long in Shinohara, 1981); number of leg-bearing segments usually 55–57 (55♂–59♀ pairs of leg-bearing segments in Shinohara, 1981); with transverse suture on the cephalic plate; cephalic pleurite without setae; with 28 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum parallelogram-formed with a truncated anterior margin; internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 1.8 times as long as wide, situated from femur to distal half of trochanteroprefemur; metasternites with dense setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 9 on each coxopleuron; all sparse on the ventral surface of the coxopleuron, distinctly denser close to the lateral margin of the metasternite.

Description. ***General features.*** Body 42–57 mm long (15–22 mm long in Shinohara, 1981); with 55–57 leg-bearing segments (55♂–59♀ pairs of leg-bearing segments in Shinohara, 1981); narrowing forward and towards the posterior tip. Color (in ethanol 75%) reddish yellow; forcipules darker.

Cephalic capsule (Fig. 6A, C) sub-quadratic; *ca.* 1.1 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 5 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2 medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 6B) almost uniform in width; *ca.* 3.7 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 1.1 times as long as wide); distal articles stouter (article XIII *ca.* 0.9 times as long as wide); article XIV *ca.* 2.1 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with distinctly two whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 6D) with a single pectinate lamella with *ca.* 28 hyaline teeth.

First maxillae (Fig. 6E). Coxosternite entire; uniformly areolate; without lappets; 1+1 setae on anterior middle part. Coxal projection sub-triangular; about as wide as long; ventral side with 3 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 4+2 long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 6E). Coxosternite entire; uniformly areolate; anterior margin deeply concave, setae on anterior middle part indistinct. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 6F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 2.6 times as wide as long. Coxosternite *ca.* 1.8 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.2 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.6 times of their basal breadth. Forcipular intermediate articles with slightly projections. Tarsungulum *ca.* 2.1 times as long as wide. Basal denticle of tarsungulum parallelogram-formed, with a truncated anterior margin, distal margin slightly convex, basal margin quite straight and *ca.* 0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 1.0 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 6G). Tergite 1 wider than metatergite 2; lateral margins converging backward.

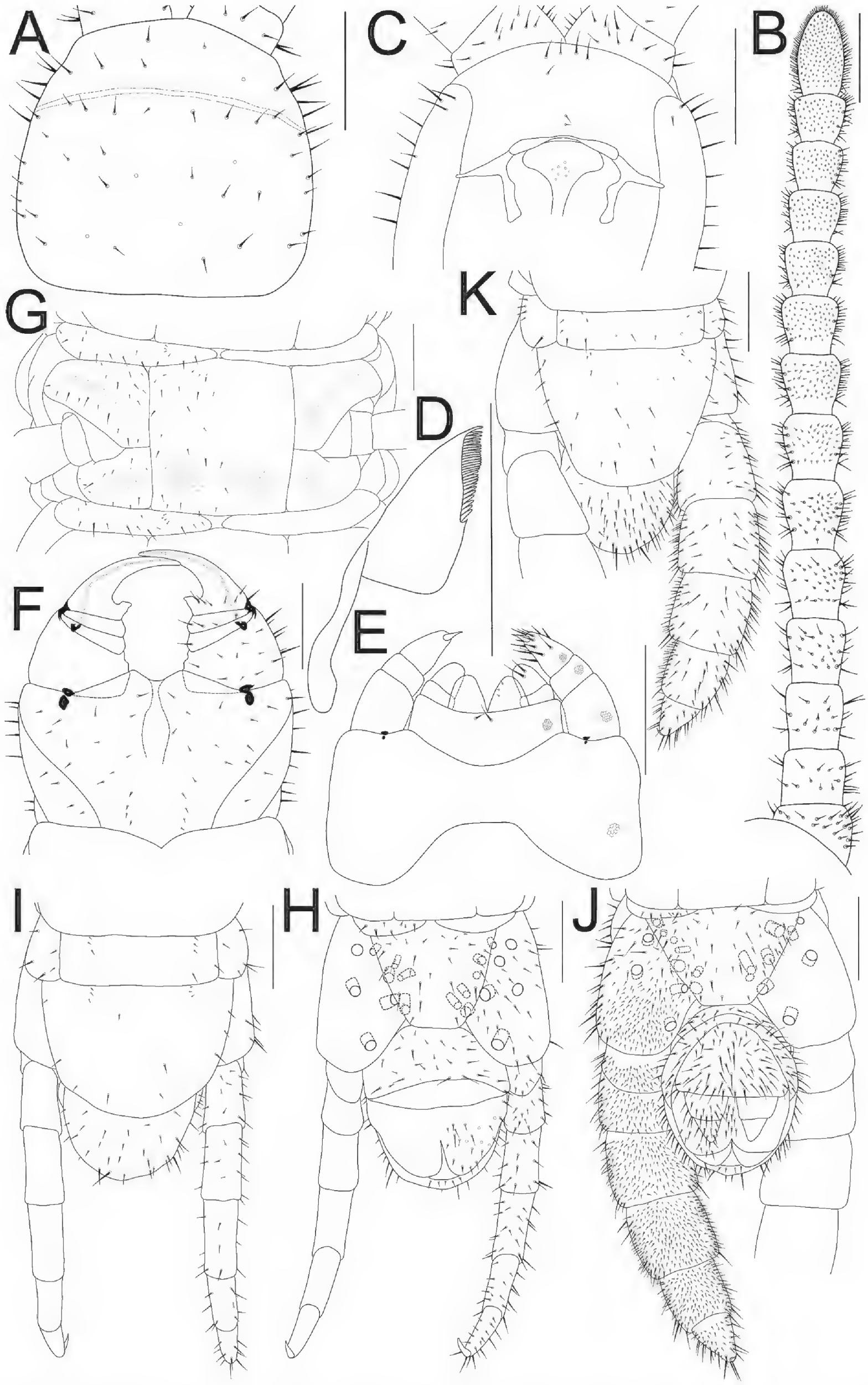

Figure 6. *Strigamia platydentata* Shinohara, 1981. **A.** Cephalic plate, dorsal; **B.** Left antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on right coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal (setae on left coxopleuron and ultimate leg omitted); **J.** Posterior end of body in adult male, ventral (setae on left coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal. Areolation drawn in part in **A, C, E**. Specimens: ♂ (CMMI 20210702002D) (**J, K**); ♀ (CMMI 20210702003D) (**A–I**). Scale bars: 250 μm.

Metasternites sub-rectangular; with dense setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 6H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 3.0 times as wide as long on exposed part. Metatergite *ca.* 1.3–1.5 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.5–1.6 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 9–10 (♀), 9–10(♂) on each coxopleuron; opening independently; all sparse on the ventral surface but densely in lateral margin of the metasternite and some of them covered by that; diameter of the coxal pores similar to that of the respective ducts; male setae slightly denser close to the ventral posterior edge of the coxopleuron, female sparse. Ultimate leg *ca.* 0.8 times as long as penultimate leg, distinctly swollen, with very dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.3 times as long as tarsus.

Postpedal segments (Fig. 6H, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores present. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 1.9 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Remarks. This species differs from its congeners in terms of the characteristic profile of the forcipular tarsungulum basal denticle. This species is recorded for the first time in China.

Distribution. China (Henan Province).

Strigamia korsosi Bonato, Bortolin, Drago, Orlando & Dányi, 2017

Figs 1F, 7

Strigamia korsosi Bonato, Bortolin, Drago, Orlando, Dányi, 2017: appendix S1. 6–10, figs A–J.

Material examined. China – **Anhui Province** • 1♀ (CMMI 20250417001D), Chuzhou, Langya Mountain, Yujiawa (32.2778°N, 118.2950°E), 90 m asl., 17.iv.2025, leg. Chao Jiang. – **Chongqing** • 2♀♀ (CMMI 20250510008D–009D), Wuxi County, Yintiaoling Nature Reserve, Hongqi Protection Area, Benzhuping (31.2939°N, 109.4843°E), 1580 m asl., 10.v.2025, leg. Yutong Zhang & Hongyan Zhang. – **Fujian Province** • 1♀ (CMMI 20240917001D), Sanming, Jiangle County, Mt. Longqi, Shangxiantang (26.5177°N, 117.3086°E), 830 m asl., 17.ix.2024, leg. Chao Jiang. – **Henan Province** • 1♀ (CMMI 20250331014), Pingdingshan, Yinji Town, Chengchuigou, (33.1821°N, 113.5907°E), 280 m asl., 31.iii.2025, leg. Chao Jiang & Jing Zhong. – **Jiangxi Province** • 2♀♀ (CMMI 20230316044–045), Jiujiang, Xunyang Dist., Nanhu Park (29.7119°N, 115.9986°E), 30 m asl., 16.iii.2023, leg. Chao Jiang. – **Jiangsu Province** • 1♂ (CMMI 20200825114), Nanjing, Mt. Fangshan (31.8953°N, 118.8760°E), 120 m asl., 25.viii.2020, leg. Chao Jiang; • 1♀ (CMMI 20201214102), Nantong, 14.xii.2020, leg. Quanyu Ji; • 1♀ (CMMI 20230511003D), Suzhou, Mt. Qionglongshan (31.2653°N, 120.4237°E), 160 m asl., 11.v.2023, leg. Chao Jiang. – **Zhejiang Province** • 1♀ (CMMI 20191031044), Zhoushan, Dinghai Dist., Mt. Changgangshan (30.0355°N, 122.1201°E), 130 m asl., 31.x.2019, leg. Chao Jiang.

Diagnosis. Body length reaching at least 20 mm (at least 14 mm long in Bonato et al. 2017); number of leg-bearing segments usually 45–55 (33–37 pairs of leg-bearing segments in Bonato et al. 2017); with transverse suture on the cephalic plate; cephalic pleurite without setae; with 30 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular, internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 2.0 times as long as wide, situated from femur to distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 16 on each coxopleuron; clustered in two groups, one anterior to the other, each of them inside an indistinct common pit close to the lateral margin of the metasternite.

Description. ***General features.*** Body 20–35 mm long (at least 14 mm long in Bonato et al. 2017); with 45–55 leg-bearing segments (33–37 pairs of leg-bearing segments in Bonato et al. 2017); narrowing forward and towards the posterior tip. Color (in ethanol 75%) reddish yellow; forcipules darker.

Cephalic capsule (Fig. 7A, C) sub-quadratic; *ca.* 1.1 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2 medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

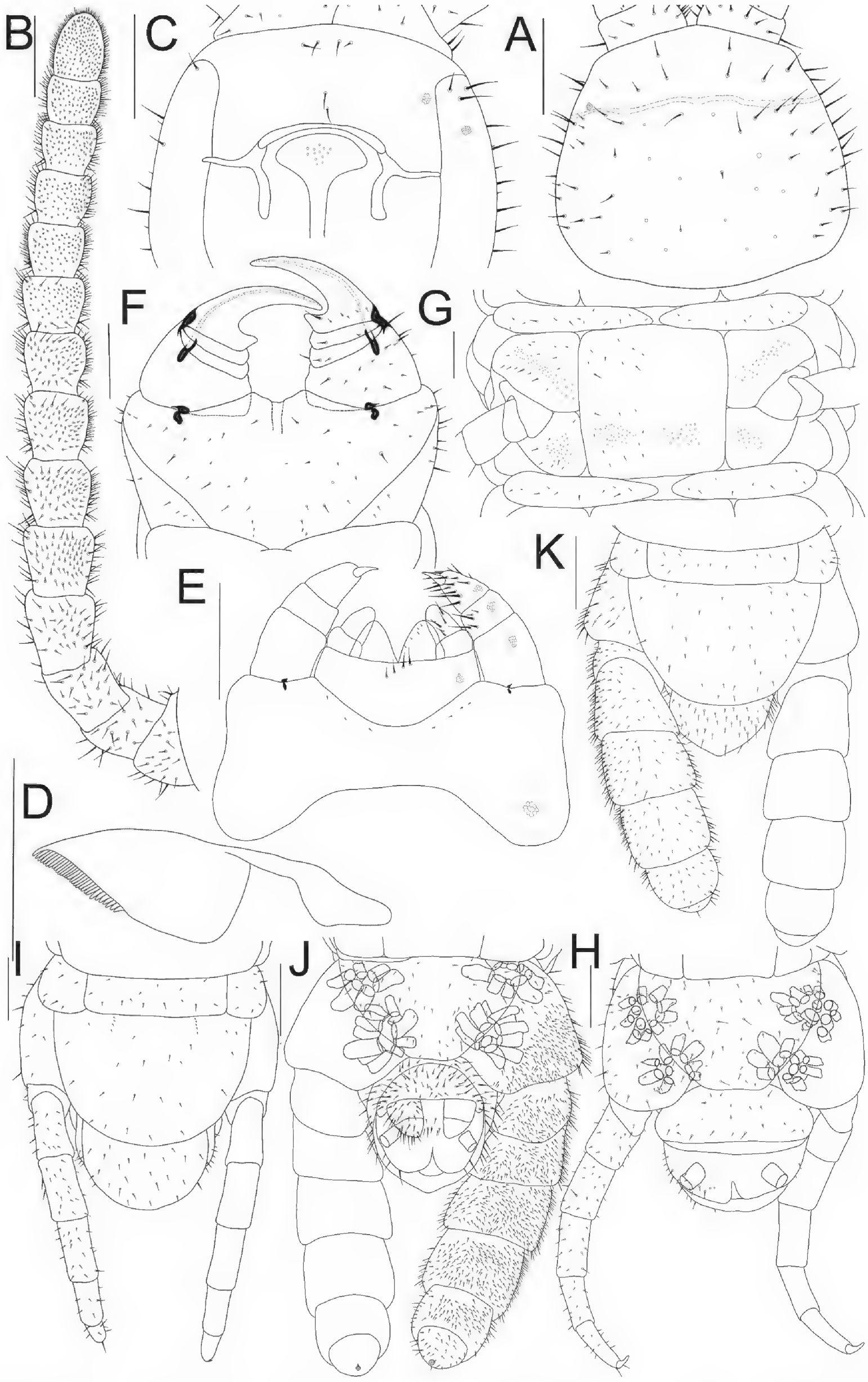

Figure 7. *Strigamia korsosi* Bonato, Bortolin, Drago, Orlando, Dányi, 2017. **A.** Cephalic plate, dorsal; **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal (setae on right coxopleuron and ultimate leg omitted); **J.** Posterior end of body in adult male, ventral (setae on left coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal. Areolation drawn in part in **A, C, E**. Specimens: ♂ (CMMI 20201214102) (**A, J, K**); ♀ (CMMI 20230316044) (**B–I**). Scale bars: 250 μm.

Antennae (Fig. 7B) almost uniform in width; *ca.* 2.9 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 1.2 times as long as wide); distal articles stouter (article XIII *ca.* 0.7 times as long as wide); article XIV *ca.* 0.8 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–XI with distinctly two whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 7D) with a single pectinate lamella with *ca.* 30 hyaline teeth.

First maxillae (Fig. 7E). Coxosternite entire; uniformly areolate; without lappets; 2+2 setae on anterior middle part. Coxal projection sub-triangular; about as wide as long; ventral side with 5 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 2+3 long setae and 3+3 short setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 7E). Coxosternite entire; uniformly areolate; anterior margin deeply concave, 3+4 setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 7F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 3.5 times as wide as long. Coxosternite *ca.* 2.2 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.3 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles with slightly projections. Tarsungulum *ca.* 2.1 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.6 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 2.0 times as long as wide, situated from femur to distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 7G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with sparse setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/4 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 7H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 4.0 times as wide as long on exposed part. Metatergite *ca.* 1.5–1.8 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.7–1.8 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 20–23 (♀), 19–21(♂); clustered in two couples on each coxopleuron, one anterior to the other, each of them inside an inconspicuous common pit close to the lateral margin of the metasternite; diameter of the coxal pores similar to that of the respective ducts; setae distinctly denser and shorter on the posterior part of the ventral side of the coxopleuron. Ultimate leg *ca.* 0.9 times as long as penultimate leg, distinctly swollen, with very dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.3 times as long as tarsus.

Postpedal segments (Fig. 7H, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores present. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 2.5 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Remarks. To the best of our knowledge, this is the first report of this species in China. Several larval specimens (8–11 mm body length), accompanied by their parents, were collected from Suzhou, Jiangsu Province, and shared diagnostic characteristics with the Japanese species *Strigamia monoporus* (Takakuwa, 1938), including a single large coxal pore per coxopleuron and distal antennal segments twice as long as they are wide, exceeding twice the length of the preceding segment. However, a critical morphological distinction exists in the basal denticle of the forcipular tarsungulum in *S. monoporus*, which is diminutive and positioned distally to the tarsungular base (Takakuwa 1938, 1940), in contrast to the morphology observed in the Chinese material. The holotype of *S. monoporus* (10 mm total length) had an antennal morphology consistent with its larval traits, suggesting that it may represent an immature stage, rather than a diagnostically informative adult. Given the limited morphological utility of the holotype, the absence of adult specimens for comparison, and the insufficient original description, we propose that *S. monoporus* should be treated as a *nomen dubium*.

Distribution. China (Anhui, Fujian, Henan, Jiangsu, Jiangxi and Zhejiang Provinces, Chongqing).

Strigamia asiatica Jiang & Yu, sp. nov.

https://zoobank.org/D9320A41-2DFB-46BE-8051-20EEDB0A1F55

Figs 1M, 8

Material examined. ***Holotype.*** **China** • ♂ (CMMI 20250307001D), Shandong Province, Jinan, Mt. Wanlingshan, 7.iii.2025, leg. Xinyu Miao & Yukun Fan.

Paratype. **China** • 1♂ (CMMI 20250417002D), Anhui Province, Chuzhou, Mt. Langyashan, Yujiawa (32.2778°N, 118.2950°E), 90 m asl., 17.iv.2025, leg. Chao Jiang.

Diagnosis. Body length reaching at least 20 mm; number of leg-bearing segments usually 41–47; with transverse suture on the cephalic plate; cephalic pleurite evidently with sparse setae; with at least 23 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite shallowly concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular, internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 1.8 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; metasternites without mid-longitudinal deep sulcus; pore-fields not on the anterior part; pretergite and intercalary pleurites of the ultimate leg-bearing segment comprising a singular, undivided pleuropretergite; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 6 on each coxopleuron; the most posterior coxal pore on each coxopleuron distinctly displaced from all other pores.

Description. ***General features.*** Body 20–30 mm long; with 41–47 leg-bearing segments; narrowing forward and towards the posterior tip. Color (in ethanol 75%) shallow orange; forcipules darker.

Cephalic capsule (Fig. 8A, C) sub-quadratic; *ca.* 1.0 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 5 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 1 medial prelabral seta on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 8B) almost uniform in width; *ca.* 3.4 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 0.8 times as long as wide); distal articles stouter (article XIII *ca.* 1.8 times as long as wide); article XIV *ca.* 1.5 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with distinctly three whorled long setae along with numerous short setae; remaining articles equipped with uniform setae.

Mandible (Fig. 8D) with a single pectinate lamella with *ca.* 23–27 hyaline teeth.

First maxillae (Fig. 8E). Coxosternite entire; uniformly areolate; without lappets; setae on anterior middle part indistinct. Coxal projection sub-triangular; as wide as long; ventral side with 5+5 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 3+2 long setae and 1+2 short setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 8E). Coxosternite entire; uniformly areolate; anterior margin shallowly concave; setae close to the anterior margin indistinct. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 8F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 2.3 times as wide as long. Coxosternite *ca.* 1.9 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border shallow concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.0 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.6 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.6 times as long as wide. Basal denticle of tarsungulum with distal margin slightly convex, basal margin quite straight and *ca.* 0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 1.8 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 8G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 8H, I). Pretergite and intercalary pleurites comprising a singular, undivided pleuropretergite; pretergite *ca.* 4.5 times as wide as long on exposed part. Metatergite *ca.* 1.2 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.5 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3 times as wide as anterior margin; with setae of various sizes. Coxal pores 5–6 on each coxopleuron; opening independently; all coxal pores distinctly aggregated close to the lateral margins of the metasternite, with the possible exception of a single pore on each coxopleuron; diameter of the coxal pores similar to that of the respective ducts; ventral of the coxopleuron with dense setae. Ultimate leg *ca.* 0.9 times as long as penultimate leg, with dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.2 times as long as tarsus.

Postpedal segments (Fig. 8H). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores indistinct.

Etymology. The species epithet "*asiatica*" from Asia, refers to the geographic distribution of this species. It is used to distinguish it from other congeners with a single entire pleuropretergite an intact anterior dorsal plate, which are distributed in Europe and North America. We suggest the Chinese common name as "亚洲地蜈蚣".

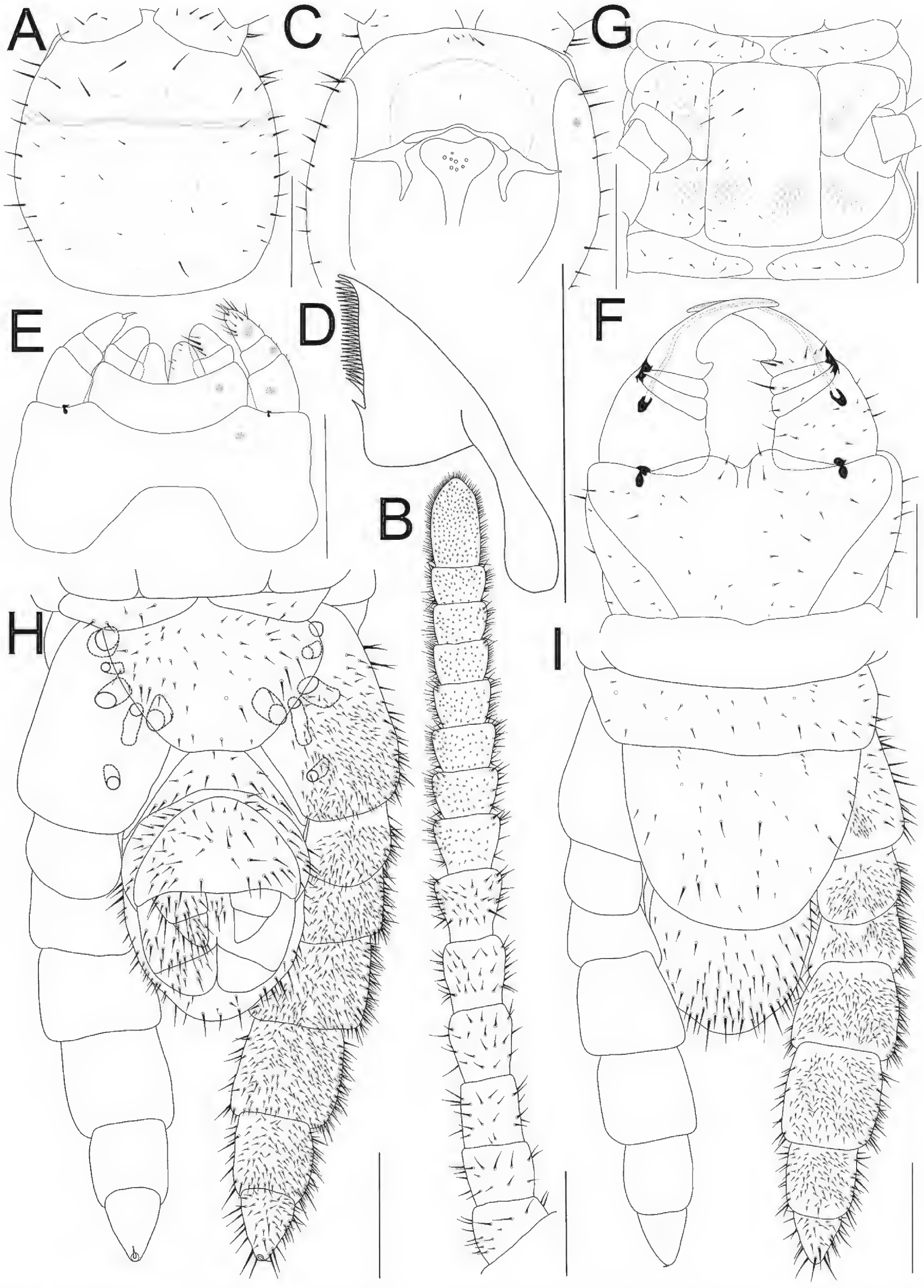

Figure 8. *Strigamia asiatica* sp. nov., holotype. **A.** Cephalic plate, dorsal (most part of antennae, legs omitted); **B.** Left antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on right part omitted); **H.** Posterior end of body in adult male, ventral (setae on right coxopleuron and ultimate leg omitted omitted); **I.** Ditto, dorsal (setae on left coxopleuron and ultimate leg omitted omitted). Areolation drawn in part in **C, E**. Scale bars: 250 μm.

Remarks. This is the first *Strigamia* species with a singular undivided pleuropretergite in the ultimate leg-bearing segment recorded in East Asia. Within this genus, this morphological feature has been reported in at least 11 species: *S. acuminata* (Leach, 1815), *S. bidens* Wood, 1862; *S. bothriopus* Wood, 1862; *S. cottiana* Verhoeff, 1935; *S. crassipes* (C.L. Koch, 1835), *S. crinita* (Attems, 1929), *S. engadina* (Verhoeff, 1935), *S. epileptica* Wood, 1862; *S. exul* (Meinert, 1886), *S. lutea* Matic, 1985; and *S. transsilvanica* (Verhoeff, 1928). All these congeners are distributed across Europe and North America, except for *S. transsilvanica*, which has also been recorded in Japan by Takakuwa (1938, 1940). However, the validity of the Japanese record was challenged by Bonato et al. (2012), who suggested potential misidentification issues.

The new species is differentiated from its congeners through three principal morphological characters and biogeographical evidence: (1) the number of leg-bearing segments: the new species possesses 41–47 leg-bearing segments, in contrast to *S. bidens* (Wood 1862; Attems 1929), *S. epileptica* (Wood 1862; Chamberlin 1954), and *S. exul* (Meinert 1886; Attems 1929) which all possess >65 segments; (2) clypeal characteristics: the anterior clypeal region bears just 5 post-antennal setae (Fig. 8C), differing significantly from *S. acuminata* (Brolemann 1930: fig. 174; Iorio 2005: fig. 1C; Bonato et al. 2023: fig. B), *S. crassipes* (Iorio 2005: fig. 1A; Bonato et al. 2023: fig. C), and *S. transsilvanica* (Iorio 2005: fig. 1B); and (3) forcipular morphology: the tarsungulum displays basally subparallel internal and external margins, gradually converging distally (cf. Bonato et al. 2012), a configuration distinct from that of *S. engadina*. Additionally, the morphological characteristics of the coxal pores were comparable to those of *S. bothriopus* (Bonato et al. 2012: fig. 7), with the latter having coxal pores scattered on each coxopleuron. The new species can be distinguished by its geographic distribution from *S. crinita*, *S. lutea*, and *S. cottiana*, which are restricted to European territories distant from East Asia (Bonato et al. 2012).

Distribution. China (Anhui, and Shandong Provinces).

Strigamia dianguiensis Jiang & Yu, sp. nov.

https://zoobank.org/F965FFB2-364C-4DBE-8776-C1DB4B797D9F

Figs 1I, 9

Material examined. ***Holotype.*** **China** • ♀ (CMMI 20201021120), Yunnan Province, Chuxiong Yi Autonomous Prefecture, Lufeng County, Yipinglang Town (25.1592°N, 101.9050°E), 1700 m asl., 21.x.2020, leg. Chao Jiang & Zhidong Wang.

Other materials. **China** • 1♀ (CMMI 20250802029), Yunnan Province, Dali Bai Autonomous Prefecture, Yangbi Yi Autonomous County, Mt. Laoheshangshan (25.6735°N, 99.9639°E), 1570 m asl., 2.viii.2023, leg. Xuankong Jiang, Yuan Xiong & Yifei Yu. – **Guangxi Zhuang Autonomous Region** • 1♀ (CMMI 20231223001D), Leye County, Tongle Town, Niuping Village (24.7775°N, 106.5238°E), 920 m asl., 23.xii.2023, leg. Chao Jiang.

Diagnosis. Body length reaching at least 36 mm; number of leg-bearing segments usually 51; with transverse suture on the cephalic plate; cephalic pleurite evidently with sparse setae; with 36 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum truncated; internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 1.6 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with very dense setae of various sizes, without a mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 12 on each coxopleuron; the most posterior coxal pore on each coxopleuron distinctly displaced from all other pores.

Description. ***General features.*** Body 36 mm long; with 51 leg-bearing segments; narrowing forward and towards the posterior tip. Color (in ethanol 75%) shallow orange; forcipules darker.

Cephalic capsule (Fig. 9A, C) sub-quadratic; *ca.* 1.2 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along an indistinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2 medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 9B) almost uniform in width; *ca.* 3.1 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 1.3 times as long as wide); distal articles stouter (article XIII *ca.* 1.0 times as long as wide); article XIV *ca.* 1.5 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–XIII with three basal whorled long setae along with numerous short setae; remaining articles equipped solely with short setae.

Mandible (Fig. 9D) with a single pectinate lamella with *ca.* 36 hyaline teeth.

First maxillae (Fig. 9E). Coxosternite entire; uniformly areolate; without lappets; 2+1 setae on anterior middle part. Coxal projection sub-triangular; wider than long; ventral side with 3+3 small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 3+3 long setae and 2+2 short setae on distal half; dorsal surface with numerous small sensilla on distal half.

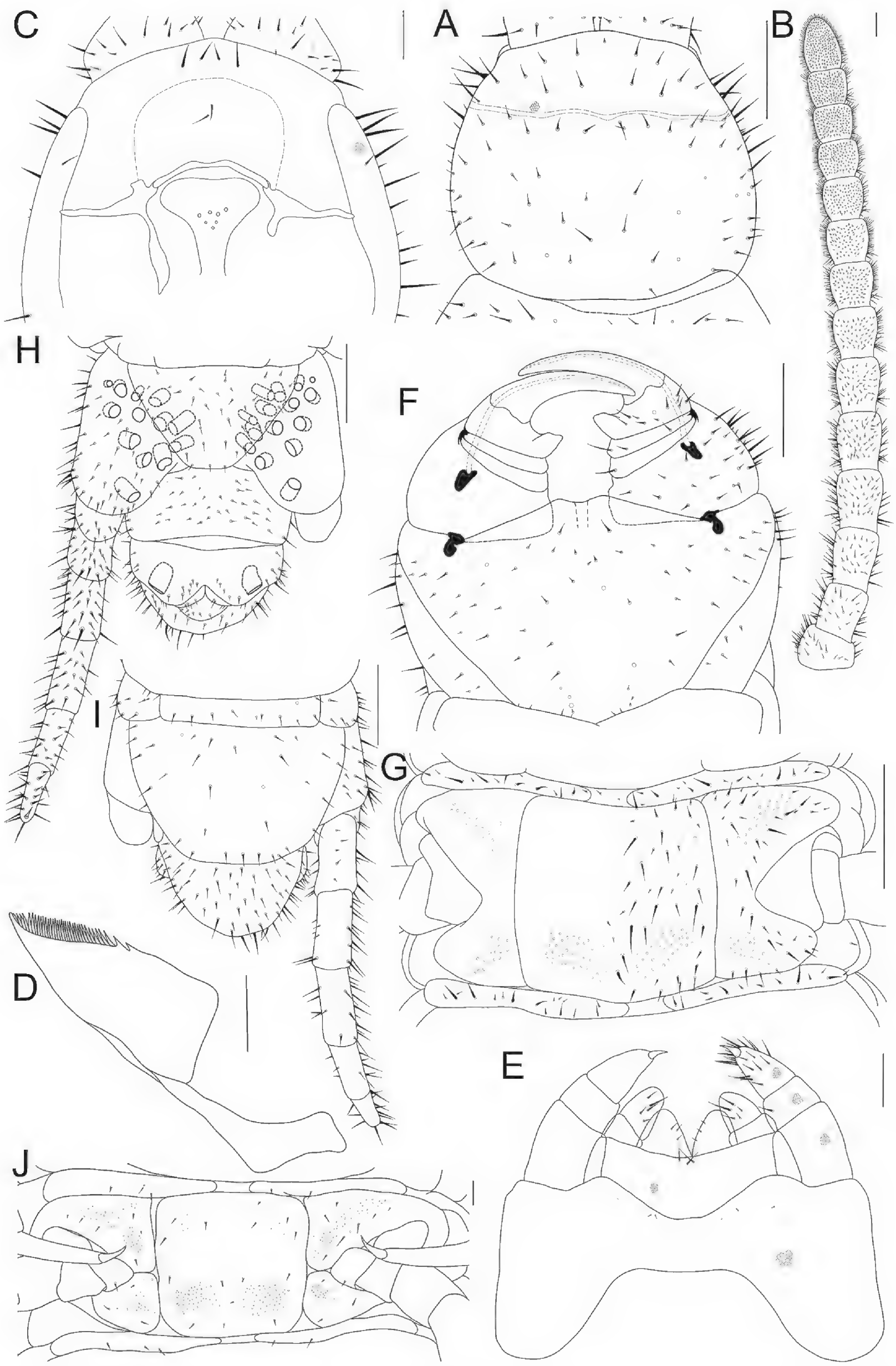

Figure 9. *Strigamia dianguiensis* sp. nov., holotype. **A.** Head and anterior trunk segments, dorsal (most part of antennae, legs omitted); **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on right part omitted); **H.** Posterior end of body in adult female, ventral (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal; **J.** Sternum of leg-bearing segment, ventral. Areolation drawn in part in **A, C, E**. Specimens: *Strigamia dianguiensis* sp. nov. (**A–I**); *S. svenhedini* (**J**). Scale bars: 250 µm (**A, F–I**); 100 µm (**B–E, J**).

Second maxillae (Fig. 9E). Coxosternite entire; uniformly areolate; anterior margin deeply concave; 3+3 small setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 9F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 2.7 times as wide as long. Coxosternite *ca.* 1.7 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border approximately straight medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.2 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.1 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 1.6 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 9G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with very dense setae of various sizes; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 9H, I). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 5.2 times as wide as long on exposed part. Metatergite *ca.* 1.9 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.6 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 12–14 on each coxopleuron; opening independently; all coxal pores distinctly aggregated close to the lateral margins of the metasternite, with the possible exception of a single pore on each coxopleuron; diameter of the coxal pores similar to that of the respective ducts; ventral of the coxopleuron with sparse setae. Ultimate leg *ca.* 0.9 times as long as penultimate leg, with dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.2 times as long as tarsus.

Postpedal segments (Fig. 9H). Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 2.8 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores indistinct.

Etymology. The specific epithet refers to the distribution of this species in Guangxi and Yunnan. "Dian" is a traditional name for Yunnan, and "Gui" for Guangxi. We suggest the Chinese common name as "滇桂地蜈蚣".

Remarks. The new species exhibited morphological similarities to *S. svenhedini* (Verhoeff, 1933), but can be distinguished by its higher number of, and longer, sternal setae, distinct basal denticle morphology on the tarsungulum, and discrete openings of coxopleural pores, rather than the clustered arrangement observed in *S. svenhedini* (Verhoeff 1933: fig. 16).

Distribution. China (Guangxi Zhuang Autonomous Region and Yunnan Province).

Strigamia laterisetosa Jiang & Yu, sp. nov.

https://zoobank.org/0EA75B06-B7CF-4072-8909-F9F99E2C55AB

Figs 1G, 1N–O, 10

Material examined. ***Holotype.*** **China** • ♂ (CMMI 20241107003D), Zhejiang Province, Longgang, Jingtou Scenic Area (27.5070°N, 120.4830°E), 70 m asl., 7.xi.2024, leg. Chao Jiang.

Paratype. • 1♀ (CMMI 20241107002D), same as holotype.

Other materials. China • 1♂ (CMMI 20201218105), Guangdong Province, Longchuan County, Xiaping Village (24.0319°N, 115.2360°E), 250 m asl., 18.xii.2020, leg. Chao Jiang; • 1♂ (CMMI 20191014013), Guangzhou, Baiyun Dist., Maofengshan Forest Park (23.2983°N, 113.4644°E), 330 m asl., 14.x.2019, leg. Chao Jiang. – **Jiangsu Province** • 1♀, 3♂♂ (CMMI 20201105114–115, 20201105117, 20201105120), Lianyungang, Haizhou Dist., Shipengshan Scenic Area (34.5988°N, 119.1703°E), 34 m asl., 5.xi.2020, leg. Zhidong Wang.

Diagnosis. Body length reaching at least 34 mm; number of leg-bearing segments usually 51–53; with transverse suture on the cephalic plate; cephalic pleurite evidently with sparse setae; with 30 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; basal denticle of the forcipular tarsungulum sub-triangular; internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of poison gland *ca.* 3.3 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with sparse setae of various sizes, without a mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; coxal pores at least 13 on each coxopleuron, distinctly aggregated close to the lateral margins of the metasternite with the possible exception of a single pore on each coxopleuron.

Description. ***General features.*** Body 34(♂), 36(♀) mm long; with 51(♂), 53(♀) leg-bearing segments; narrowing forward and towards the posterior tip. Color (in 75% ethanol) light yellow or reddish yellow; forcipules darker.

Cephalic capsule (Fig. 10A–C) sub-quadratic; *ca.* 1.0–1.1 times as wide as long; all margins convex; areolation uniform on the entire surface but less sclerotized along a distinct transverse suture; setae scattered. Cephalic pleurite

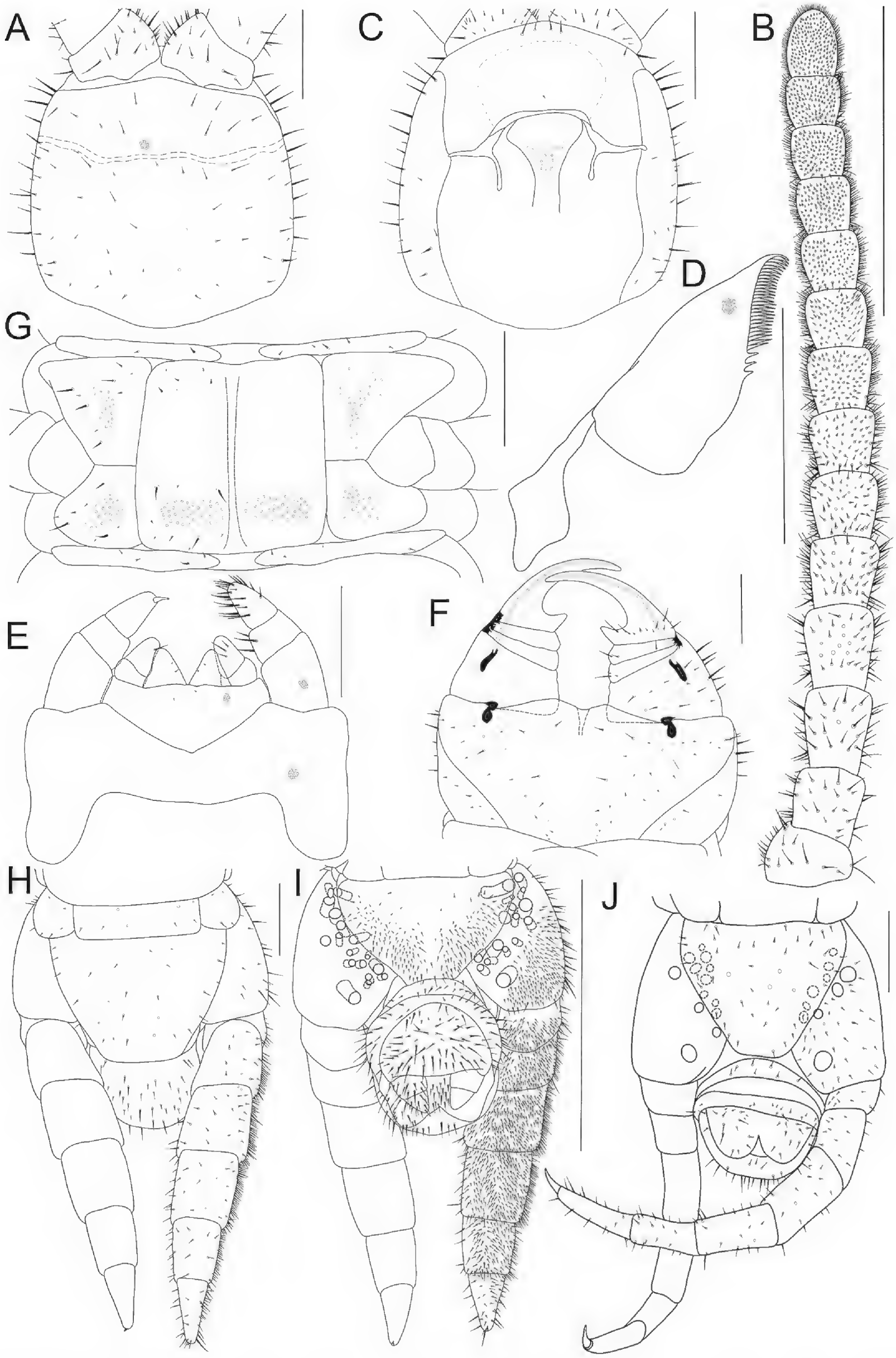

Figure 10. *Strigamia laterisetosa* sp. nov. **A.** Cephalic plate, dorsal; **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral (setae on right part omitted); **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult male, dorsal (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal (setae on right coxopleuron and ultimate leg omitted); **J.** Posterior end of body in adult female, ventral (setae on right coxopleuron and ultimate leg omitted). Areolation drawn in part in **A, D–E**. Specimens: holotype (**A–I**); paratype (**J**), ♀ (CMMI 20241107002D). Scale bars: 250 μm (**A, C–H, J**); 1 mm (**B, I**).

with 11–15 setae on each side and setae slightly denser close to the ventral posterior edge of each cephalic pleurite. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 1(♂), 2(♀) medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 10B) almost uniform in width; *ca.* 3.4 times as long as the width of the head. Basal articles slightly elongated (article II *ca.* 1.1 times as long as wide); distal articles stouter (article XIII *ca.* 1.0 times as long as wide); article XIV *ca.* 2 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with three basal whorled long setae along with numerous short setae; remaining articles equipped solely with short setae.

Mandible (Fig. 10D) with a single pectinate lamella with *ca.* 30 hyaline teeth.

First maxillae (Fig. 10E). Coxosternite entire; uniformly areolate; without lappets; 1+1 setae on anterior middle part. Coxal projection sub-triangular; about as wide as long; ventral side with 2(♂), 7(♀) small setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 4(♂), 11(♀) long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 10E). Coxosternite entire; uniformly areolate; anterior margin deeply concave, with indistinct setae. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 10F). Tergite sub-trapezoid with lateral margins convex and subparallel, *ca.* 3.0 times as wide as long. Coxosternite *ca.* 2.2 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border slightly concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.3 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.5 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.3 times as long as wide. Basal denticle of forcipular tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 3.3 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 10G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular, with a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Porefields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/5 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 10H–J). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 3.5 times as wide as long on exposed part. Metatergite *ca.* 1.4 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.3(♀), 2.0(♂) times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 13(♀), 17(♂) on each coxopleuron; opening independently; all coxal pores distinctly aggregated close to the lateral margins of the metasternite with the possible exception of a single pore on each coxopleuron, diameter of the coxal pores similar to that of the respective ducts; male setae slightly denser close to the ventral posterior edge of the coxopleuron, female sparse. Ultimate leg *ca.* 1.1 times as long as penultimate leg, male distinctly swollen, ventral and lateral sides with very dense setae, female sparse. Ultimate pretarsus a claw; *ca.* 0.2(♂), 0.3(♀) times as long as tarsus.

Postpedal segments (Fig. 10I, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores indistinct. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 5 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina not distinctly bilobate, with sparse setae; anal pores indistinct.

Etymology. The specific epithet refers to the cephalic pleurite with sparse setae. We suggest the Chinese common name as "侧毛地蜈蚣".

Remarks. This new species is similar to *S. svenhedini* (Verhoeff, 1933) in its coxal pore distribution; the most posterior coxal pore on each coxopleuron is distinctly displaced from all other pores (Verhoeff 1933; Bonato et al. 2012). However, *S. svenhedini* exhibits clustered anterior coxal pores arranged independently; in contrast, the coxal pores of *S. laterisetosa* are fan-arranged, with elevated coxal pores near the metasternite of the ultimate leg-bearing segment and evenly distributed along its margin. Additionally, the new species with cephalic pleurites bears 11–15 setae that are densely clustered near the midventral region, which are absent in *S. svenhedini*.

Distribution. China (Guangdong, Jiangsu and Zhejiang Provinces).

Strigamia longiglanda Jiang & Yu, sp. nov.

https://zoobank.org/6EA0AAD5-168A-41F2-8027-5D7859D3445C

Figs 1H, 11

Material examined. ***Holotype.*** **China** • ♀ (CMMI 20241206001D), Fujian Province, Xiamen, Siming Dist., Mt. Dongpingshan (24.4556°N, 118.1195°E), 1720 m asl., 6.xii. 2024, leg. Chao Jiang.

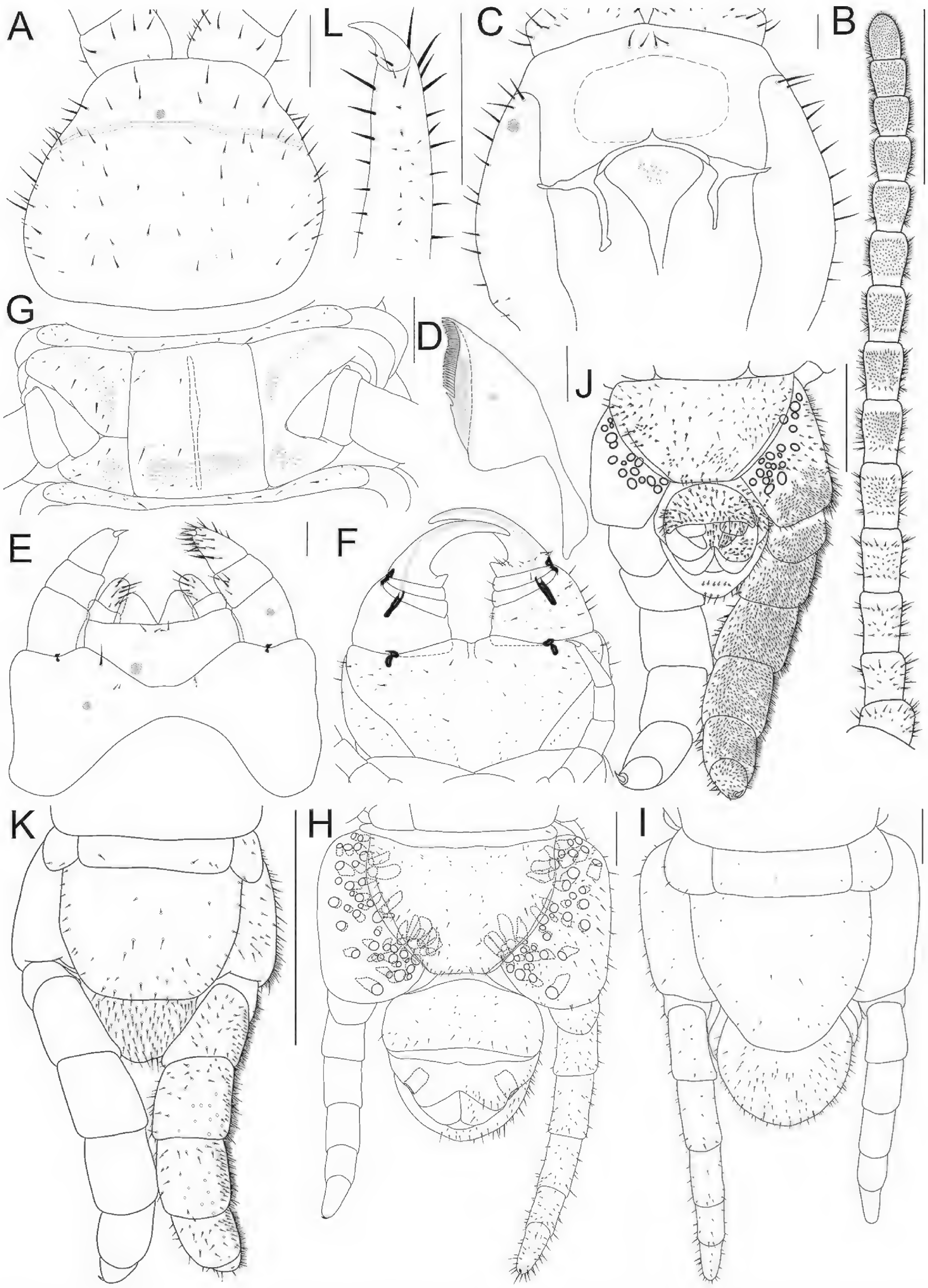

Figure 11. *Strigamia longiglanda* sp. nov. **A.** Cephalic plate, dorsal; **B.** Right antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on left part omitted); **H.** Posterior end of body in adult female, ventral (setae on right coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal; **J.** Posterior end of body in adult male, ventral (setae on right coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal (setae on left coxopleuron and ultimate leg omitted); **L.** Claw of legs. Areolation drawn in part in **A, C–E**. Specimens: holotype (**A–I**); Paratype ♂ (CMMI C240426001) (**I–J**). Scale bars: 250 μm (**A, F–I, L**); 1 mm (**B, K**); 100 μm (**C–E**); 500 μm (**J**).

Paratype. **China** • 1♂ (CMMI C240426001), Guangxi Zhuang Autonomous Region, Lingchuan County, Haiyang Township, Guiweidong Cave (25.2543°N, 110.5899°E), 800 m asl., 26.iv.2024, leg. Sunbin Huang, Mingzhi Zhao, Ran Li & Rong Chen.

Diagnosis. Body length reaching at least 50 mm; number of leg-bearing segments usually 57; with transverse suture on the cephalic plate; cephalic pleurite evidently with sparse setae; with at least 28 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular, internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum; calyx of the poison gland *ca.* 4.3 times as long as wide, situated from femur to distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; metasternites without a mid-longitudinal deep sulcus; pore-fields not on the anterior part; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment with a shallow concave on each side; coxal pores at least 16 on each coxopleuron, distinctly aggregated close to the lateral margin of the metasternite.

Description. ***General features.*** Body 52(♀), 55(♂) mm long; with 57 leg-bearing segments; narrowing forward and towards the posterior tip. Color (in 75% ethanol) shallow orange; forcipules darker.

Cephalic capsule (Fig. 11A, C) sub-quadratic; *ca.* 1.2 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along an indistinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2(♂) medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 11B) almost uniform in width; *ca.* 3 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 1.1 times as long as wide); distal articles stouter (article XIII *ca.* 1.0 times as long as wide); article XIV *ca.* 1.4 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–XIII with two basal whorled long setae along with numerous short setae; remaining articles equipped solely with short setae.

Mandible (Fig. 11D) with a single pectinate lamella with *ca.* 28(♂), 38(♀) hyaline teeth.

First maxillae (Fig. 11E). Coxosternite entire; uniformly areolate; without lappets; 2+2 setae on anterior middle part. Coxal projection sub-triangular; wider than long; ventral side setae indistinct; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 6+3 long setae and 3+5 short setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 11E). Coxosternite entire; uniformly areolate; anterior margin deeply concave; 3+3 setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 11F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 3.3 times as wide as long, slightly broader than the tergite of the first leg-bearing segment. Coxosternite *ca.* 1.9 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border slightly concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.5 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles without denticles. Tarsungulum *ca.* 2–2.3 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin slightly convex, basal margin quite straight and *ca.* 0.2–0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 4.3 times as long as wide, situated from femur to distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 11G, L). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, with two accessory spines of similar sizes, reaching *ca.* 1/4 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 11H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 3.1 times as wide as long on exposed part. Metatergite *ca.* 1.2 times as wide as long; shield-shaped. Metasternite sub-trapezoid; a shallow concave at the posterior on each side; *ca.* 1.6 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.3(♀), 0.4(♂) times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 16–19(♂), 37–47(♀) on each coxopleuron; opening independently; some of them covered by metasternite; all coxal pores distinctly aggregated close to the lateral margin of the metasternite in male, coxopleuron swollen and all sparse on the ventral surface of the coxopleuron but distinctly denser close to the lateral margin of the metasternite in female; diameter of the coxal pores similar to that of the respective ducts; dense setae on ventral surface in males, sparse in females. Ultimate

leg *ca.* 0.8(♀), 0.9(♂) times as long as penultimate leg, male distinctly swollen, with very dense setae on ventral and lateral sides, female with sparse setae. Ultimate pretarsus a claw; *ca.* 0.2 times as long as tarsus.

Postpedal segments (Fig. 11H, J). Male: intermediate sternite indistinct and not exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores indistinct. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 3.0 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina bilobate, with sparse setae; anal pores present.

Etymology. Latin: *longiglanda* = long gland. The specific epithet refers to the longer calyx of poison gland. We suggest the Chinese common name as "长腺地蜈蚣".

Remarks. This new species differs from all other known species of *Strigamia* in that it has an extremely elongated calyx in the poison gland that extends from the femur to the distal half of the trochanteroprefemur. Additionally, *S. longiglanda* sp. nov. exhibits a shallow concave at the posterior on each side of the ultimate metasternite, similar to *Strigamia fusata* Attems, 1903, and cephalic lateral plate setae similar to *S. laterisetosa* sp. nov.; however, it can be distinguished from the former by the shallow concave at the posterior on each side of the ultimate metasternite and the latter by the distribution of the coxal pores on each coxopleuron.

Distribution. China (Guangxi Zhuang Autonomous Region and Fujian Province).

Strigamia obliquidentata Jiang & Yu, sp. nov.

https://zoobank.org/54B20C79-8A9B-4256-9E76-34B95E620F48

Figs 1J, 12

Material examined. ***Holotype.*** **China** • ♂ (CMMI 20240924004D), Jilin Province, Tonghua, Dongchang Dist., Yuhuangshan (41.7316°N, 125.9380°E), 830 m asl., 24.ix.2024, leg. Chao Jiang.

Paratype. **China** • 1♂ (CMMI 20240926019D), Jilin Province, Tonghua, Jindou Korean and Manchu Ethnic Town, Luojiagou (41.7407°N, 125.6516°E), 810 m asl., 26.ix.2024, leg. Chao Jiang.

Diagnosis. Body length reaching at least 40 mm; number of leg-bearing segments usually 55–57; with transverse suture on the cephalic plate; cephalic pleurite evidently without setae; with 35 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite distinctly longer than coxal projection of the first maxillae; denticle of tarsungulum extending obliquely downward, forming an approximately right angle with internal margin; internal and external margins of the tarsungulum subparallel along the basal part, gradually converging only along the distal part; calyx of poison gland *ca.* 2.8 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; pore-fields not on the anterior part; metasternites with a mid-longitudinal deep sulcus; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 15 on each coxopleuron; all sparse on the ventral surface of the coxopleuron, distinctly denser close to the lateral margin of the metasternite.

Description. ***General features.*** Body 43 mm long; with 57–59 leg-bearing segments; narrowing forward and towards the posterior tip. Color (in ethanol 75%) reddish yellow; forcipules darker.

Cephalic capsule (Fig. 12A–C) sub-quadratic; *ca.* 1.1 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along an indistinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part, and 2 medial prelabral setae on the posterior part of the clypeus. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 12B) almost uniform in width; *ca.* 3.3 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 0.9 times as long as wide); distal articles stouter (article XIII *ca.* 0.8 times as long as wide); article XIV *ca.* 2 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with three basal whorled long setae along with numerous short setae; remaining articles equipped solely with short setae.

Mandible (Fig. 12D) with a single pectinate lamella with *ca.* 35 hyaline teeth.

First maxillae (Fig. 12E). Coxosternite entire; uniformly areolate; without lappets; 3+3 setae on anterior middle part. Coxal projection sub-triangular; about as wide as long; ventral side with 6+5 small setae and 4+4 long setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 5+7 long setae and 3+3 short setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 12E). Coxosternite entire; uniformly areolate; anterior margin deeply concave; 5+3 small setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 12F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 3.3 times as wide as long. Coxosternite *ca.* 1.8–2.2 times as wide as long on exposed part; anterior margin projecting with respect to its condyles; anterior border concave medially; coxopleural sutures strongly converging backward. Tro-

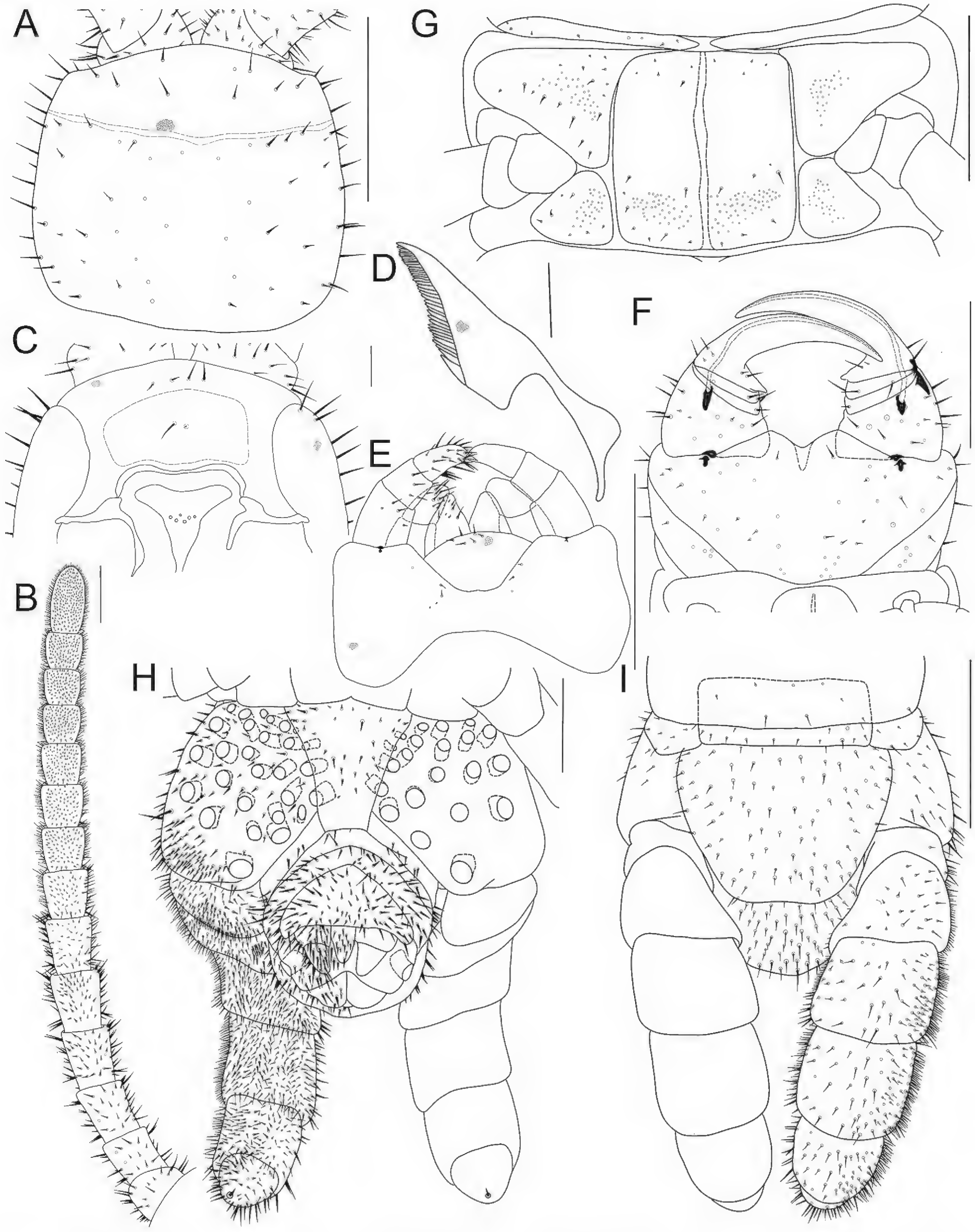

Figure 12. *Strigamia obliquidentata* sp. nov., holotype. **A.** Cephalic plate, dorsal; **B.** Left antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral view; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral view; **H.** Posterior end of body in adult male, ventral (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal. Areolation drawn in part in **A, C–E**. Scale bars: 250 μm (**A, B, H**), 100 μm (**C, D**), 500 μm (**E–G, I**).

chanteroprefemur *ca.* 1.1–1.5 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.5 times of their basal breadth. Forcipular intermediate articles without denticles. Tarsungulum *ca.* 2.3–3.1 times as long as wide. Basal denticle of tarsungulum sub-triangular, extending obliquely downward, forming an approximately

right angle with internal margin; *ca.* 0.3 times as long as the basal width of the tarsungulum. Internal and external margins of the tarsungulum subparallel along the basal part; gradually converging only along the distal part. Calyx of poison gland *ca.* 2.8 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 12G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; with a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/4 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 12H, I). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 3 times as wide as long on exposed part. Metatergite *ca.* 1.4–1.8 times as wide as long; sub-trapezoid. Metasternite sub-trapezoid; *ca.* 1.1 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.4 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 15–28 on each coxopleuron; opening independently; all sparse on the ventral surface but densely in lateral margin of the metasterniteand some of them covered by that; diameter of the coxal pores similar to that of the respective ducts; setae slightly denser close to the ventral posterior edge of the coxopleuron. Ultimate leg *ca.* 0.8 times as long as penultimate leg, distinctly swollen, with very dense setae on ventral and lateral sides. Ultimate pretarsus a claw; *ca.* 0.2 times as long as tarsus.

Postpedal segments (Fig. 12H). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores present.

Etymology. Latin: *obliquidentata* = slantingly toothed. The specific epithet refers to the oblique basal denticle of tarsungulum. We suggest the Chinese common name as "斜齿地蜈蚣".

Remarks. This new species differs from all other known species of *Strigamia* in that it has a basal denticle of the tarsungulum that extends obliquely downward, forming an approximately right angle with the internal margin, and the internal and external margins of the tarsungulum are subparallel along the basal part. While its coxal pore count and arrangement resemble those of *S. japonica* (Verhoeff, 1935) and *S. platydentata* (Shinohara, 1981) and its forcipular tarsungulum convergence pattern matches that of *S. tenuiungulata* (Takakuwa, 1938), they can all be unambiguously distinguished by the morphology of the tarsungular basal denticle. *S. alokosternum* (Attems, 1927), *S. hirsutipes* (Attems, 1927), *S. pusilla* (Sseliwanoff, 1884), *S. sacolinensis* (Meinert, 1870), *S. sibirica* (Sseliwanoff, 1881), and *S. sulcata* (Sseliwanoff, 1881) are poorly described in terms of their forcipular segment. Therefore, it can be distinguished from *S. alokosternum* (Takakuwa 1938, 1940; Bonato et al. 2012) based on the length-to-width ratio of the ultimate leg-bearing segment of the metasternite. It can be distinguished from *S. pusilla* (Sseliwanoff 1884; Bonato et al. 2012), *S. sibirica* (Sseliwanoff 1881, 1884; Bonato et al. 2012) and *S. sulcata* (Sseliwanoff 1881; Bonato et al. 2012) by the number of leg-bearing segments. The new species can be distinguished from *S. sacolinensis* (Attems 1929; Bonato et al. 2012) based on the density and arrangement of the setae on the metasternite.

Distribution. China (Jilin Province).

Strigamia xizangensis Jiang & Yu, sp. nov.

https://zoobank.org/33C01768-E4A1-4CA0-B5CC-5159F801AB93

Figs 1K, 13

Material examined. ***Holotype.*** **China** • ♂ (CMMI 20240724005D), Xizang Autonomous Region, Yadong County, Lower Yadong Town, Xiongchumo Scenic Area (27.3150°N, 89.0070°E), 2190 m asl.; 24.vii.2024, leg. Chao Jiang & Qing Li.

Paratype. **China** • 1♀ (CMMI 20240723003D), Xizang Autonomous Region, Yadong County, Lower Yadong Town, Pangda Village (27.3620°N, 88.9750°E), 2810 m asl.; 23.vii. 2024, leg. Chao Jiang & Qing Li.

Other materials. China • 1♂ (CMMI 20240715008D), Xizang Autonomous Region, Cuona County, Le Menba Ethnic Town, Le Hydropower Station (27.8200°N, 91.7460°E), 2490 m asl.; 15.vii. 2024, leg. Chao Jiang & Qing Li; • 1♀ (CMMI 20240720007D), Xigazê, Yadong County, Shangyadong Town, G562 National Highway (27.5480°N, 89.0000°E), 3460 m asl.; 20.vii. 2024, leg. Chao Jiang; • 1♂ (CMMI 20240307030D), Nyingchi, Bomi County, Qinduo Town (30.0947°N, 95.7032°E), 2850 m asl.; 7.iii. 2024, leg. Chao Jiang.

Diagnosis. Body length reaching at least 13 mm; number of leg-bearing segments usually 37–41; with transverse suture on the cephalic plate; cephalic pleurite evidently with sparse setae; with 10 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite nearly straight; telopodite and coxal projection of the first maxillae are almost equal in length; basal denticle of tarsungulum cylindrical, convex distal margin with rounded contour; calyx of poison gland *ca.* 2.5 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with sparse setae of various sizes; pore-fields not on the anterior part; metasternites without mid-longitudinal deep sulcus; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 3 on each coxopleuron, sparse on the ventral surface but densely in lateral margin of the metasternite.

Description. ***General features.*** Body 13–20(♂), 19(♀) mm long; with 37–39(♂), 41(♀) leg-bearing segments; narrowing forward and towards the posterior tip. Color (in ethanol 75%) shallow orange; forcipules darker.

Cephalic capsule (Fig. 13A, C) sub-quadratic; *ca.* 1.1–1.2 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along an distinct transverse suture; setae arranged scattered. Clypeus

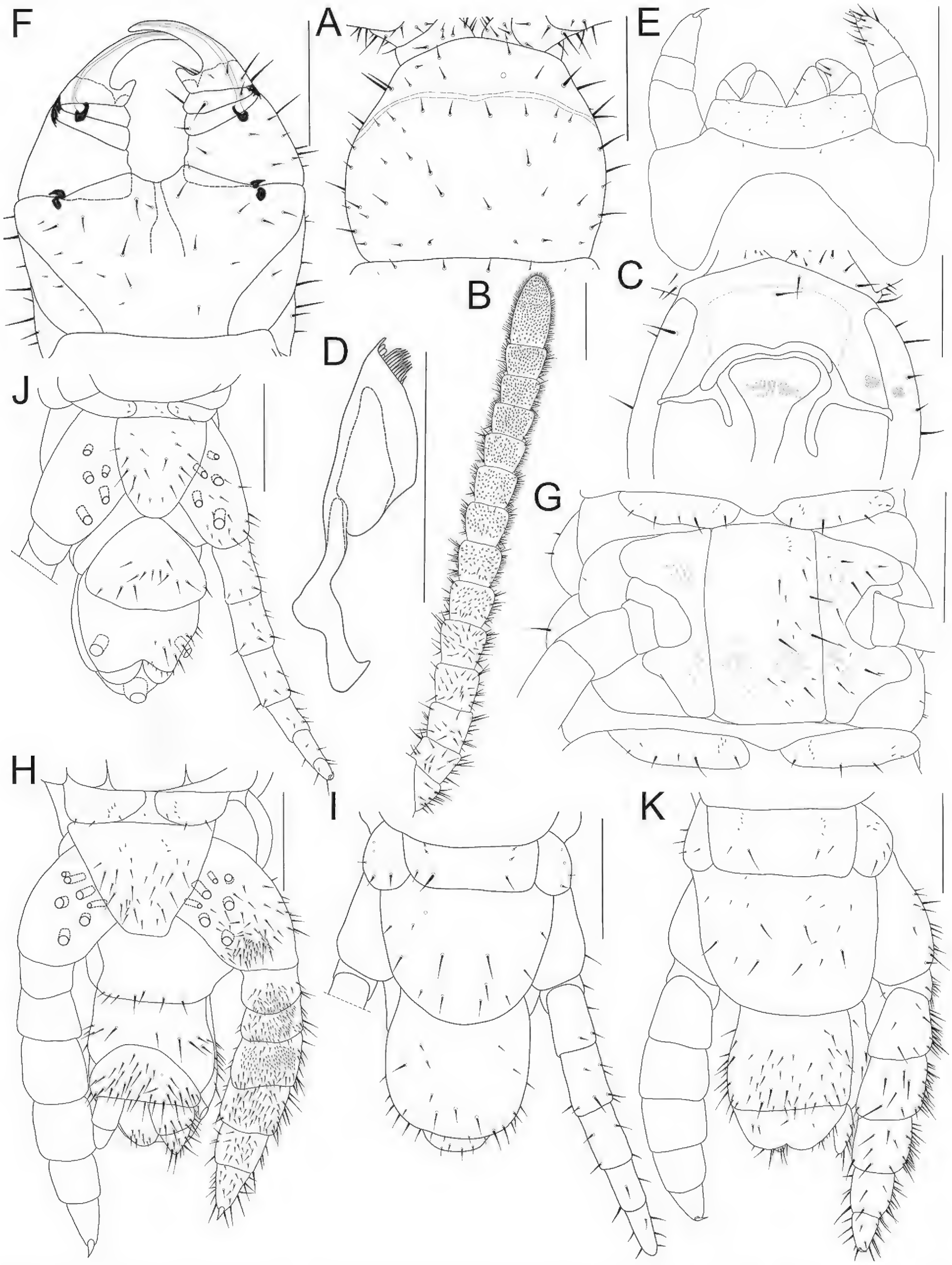

Figure 13. *Strigamia xizangensis* sp. nov. **A.** Cephalic plate, dorsal (most part of antennae, legs omitted); **B.** Left antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral; **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on right part omitted); **H.** Posterior end of body in adult male, ventral (setae on left coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal; **J.** Posterior end of body in adult female, ventral (setae on right coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal. Areolation drawn in part in **C**. Specimens: holotype (**A–H, K**); paratype (**I**), ♀ (CMMI 20240723003D). Scale bars: 250 μm.

with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 1+1 post-antennal setae aligned in two longitudinal rows on the anterior part of the clypeus, grouped in the medial part, no medial prelabral setae. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 13B) almost uniform in width; *ca.* 3.0 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 0.9 times as long as wide); distal articles stouter (article XIII *ca.* 0.8 times as long as wide); article XIV *ca.* 1.9 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–XIII with two basal whorled long setae along with numerous short setae; remaining articles equipped solely with short setae.

Mandible (Fig. 13D) with a single pectinate lamella with *ca.* 10 hyaline teeth.

First maxillae (Fig. 13E). Coxosternite entire; uniformly areolate; without lappets; 3+3 setae on anterior middle part. Coxal projection sub-triangular; wider than long; ventral side setae indistinct; dorsal surface with numerous small sensilla on distal half. Telopodite as long as the coxal projection; distinctly articulated; without lappets; ventral side with 2+2 long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig. 13E). Coxosternite entire; uniformly areolate; anterior margin nearly straight; 1+2 small setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig. 13F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 3.0 times as wide as long. Coxosternite *ca.* 1.7 times as wide as long on exposed part; anterior margin moderately projecting with respect to its condyles; anterior border approximately straight medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.6 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.4 times as long as wide. Basal denticle of tarsungulum cylindrical, convex distal margin with rounded contour, basal margin quite straight and *ca.* 0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 2.5 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 13G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/3 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 13H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 2.3 times as wide as long on exposed part. Metatergite ca. 1.3 times as wide as long; sub-trapezoid. Metasternite edge is indistinct; *ca.* 1.1 times as wide as long; lateral margins slightly concave to nearly straight, converging backwards; posterior margin *ca.* 0.2 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 3–7(♂), 5(♀) on each coxopleuron; opening independently; all sparse on the ventral surface but densely in lateral margin of the metasternite and some of them covered by that; diameter of the coxal pores similar to that of the respective ducts; male setae slightly denser close to the ventral posterior edge of the coxopleuron, female sparse. Ultimate leg *ca.* 0.9 times as long as penultimate leg, male distinctly swollen, ventral and lateral sides with very dense setae, female sparse. Ultimate pretarsus a claw; *ca.* 0.3 times as long as tarsus.

Postpedal segments (Fig. 13H, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores indistinct. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 2.2 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina not distinctly bilobate, with sparse setae; anal pores present.

Etymology. The specific epithet is derived from the Xizang Autonomous Region, the type locality of this species. We suggest the Chinese common name as "西藏地蜈蚣".

Remarks. The morphology of the coxal pores of this species is similar to that of *S. nana* Bonato, Bortolin, Drago, Orlando, Dányi, 2017 (Fig. 3G, I). However, this new species can be distinguished from *S. nana* based on the characteristics of the anterior margin of the second maxillae, the number of post-antennal setae on the anterior part of the clypeus, the number of leg-bearing segments, and the number of coxal pores. *S. nana* has a distinguished, widely concave anterior margin of the second maxillae, three post-antennal setae on the anterior part of the clypeus, up to 35 leg-bearing segments, and up to 5 coxal pores on each coxopleuron (Bonato et al. 2017). In the examined specimen, the mandible of this new species had approximately 10 hyaline teeth with 2 distinct short teeth anteriorly, a characteristic not found in other species.

Distribution. China (Xizang Autonomous Region).

Strigamia ziyunensis Jiang & Yu, sp. nov.

https://zoobank.org/8DB1DC1F-AF35-4B43-BA38-BDDDA5C45E37

Figs 1L, 14

Material examined. ***Holotype.*** **China** • ♂ (CMMI 20231221003D), Guizhou Province, Ziyun Miao and Bouyei Autonomous County, Maoying Town, Huang-

sandong Cave (25.8798°N, 106.0760°E), 1168 m asl., 21.xii.2023, leg. Chao Jiang.

Paratypes. 2♂♂ (CMMI 20231221001D–002D), same as holotype.

Other materials. **China** • 1♂ 2♀♀ (CMMI 20231221006D, 20231221004D–005D), Guizhou Province, Ziyun Miao and Bouyei Autonomous County, Tianba Grand Cave (25.9324°N, 50.7507°E), 1230 m asl., 21.xii.2023, leg. Chao Jiang.

Diagnosis. Body length reaching at least 19 mm; number of leg-bearing segments usually 47–57; with transverse suture on the cephalic plate; cephalic pleurite evidently with sparse setae; with 25 pectinate hyaline teeth in the mandible; anterior margin of the second maxillae coxosternite deeply concave; telopodite longer than coxal projection of the first maxillae; denticle of the tarsungulum sub-triangular; internal margin uniformly curved moderately concave and converging uniformly to the external margin; calyx of poison gland *ca.* 2.3 times as long as wide, situated in the distal half of trochanteroprefemur; metasternites with dense setae of various sizes; pore-fields not on the anterior part; metasternites without mid-longitudinal deep sulcus; distinct sulcus separating pretergite and intercalary pleurites of the ultimate leg-bearing segment; metasternite of the ultimate leg-bearing segment smooth, with no concave on each side; coxal pores at least 8 on each coxopleuron, distinctly aggregated close to the lateral margins of the metasternite.

Description. ***General features.*** Body 19–34(♀), 28–40(♂) mm long; with 45–57(♀), 55(♂) leg-bearing segments; narrowing forward and towards the posterior tip. Color (in ethanol 75%) orange-yellow; forcipules darker.

Cephalic capsule (Fig. 14A, C) sub-quadratic; *ca.*1.0–1.1 times as wide as long; all margins convex; areolation uniform on the entire surface, less sclerotized along a distinct transverse suture; setae arranged scattered. Clypeus with rather uniform areolation; sclerotized along the anterior margin and a median triangular area; fading close to the labrum and the paraclypeal sutures; 4 post-antennal setae aligned on the anterior part of the clypeus, grouped in the medial part. Labrum slightly projecting backwards medially, without distinct mid-piece; marginal denticles absent, with two unordered rows of long slender hyaline filaments along the entire labral margin and further rows of shorter filaments behind.

Antennae (Fig. 14B) almost uniform in width; *ca.* 3.3 times as long as the width of the head. Basal articles only slightly more elongated (article II *ca.* 0.9 times as long as wide); distal articles stouter (article XIII *ca.* 0.8 times as long as wide); article XIV *ca.* 2 times as long as wide. Setae gradually denser and shorter from the basal articles to the distal ones. Articles I–IX with three basal whorled long setae along with numerous short setae; remaining articles equipped solely with short setae.

Mandible (Fig. 14D) with a single pectinate lamella with *ca.* 25 hyaline teeth.

First maxillae (Fig. 14E). Coxosternite entire; uniformly areolate; without lappets; 3+2 setae on anterior middle part. Coxal projection sub-triangular; about as wide as long; ventral side with 3+3 small setae and 2+2 long setae on distal half; dorsal surface with numerous small sensilla on distal half. Telopodite longer than the coxal projection; distinctly articulated; without lappets; ventral side with 4+5 long setae on distal half; dorsal surface with numerous small sensilla on distal half.

Second maxillae (Fig 14E). Coxosternite entire; uniformly areolate; anterior margin deeply concave; 2+2 small setae close to the anterior margin. Telopodite composed of three articles; gradually narrowing towards the tip; claws simple; almost straight and gradually tapering on the telopodite.

Forcipular segment (Fig 14F). Tergite sub-trapezoid; with lateral margins convex and subparallel; *ca.* 2.9 times as wide as long. Coxosternite *ca.* 1.8 times as wide as long on exposed part; anterior margin projecting with respect to its condyles; anterior border slightly concave medially; coxopleural sutures strongly converging backward. Trochanteroprefemur *ca.* 1.3 times as wide as long; basal distance between trochanteroprefemora *ca.* 0.4 times of their basal breadth. Forcipular intermediate articles with slight projections. Tarsungulum *ca.* 2.2 times as long as wide. Basal denticle of tarsungulum sub-triangular, with distal margin distinctly convex, basal margin straight to slightly bulging and *ca.* 0.3 times as long as the basal breadth of the tarsungulum. Distal part of the tarsungulum uniformly tapering, its internal margin uniformly curved moderately concave and converging uniformly to the external margin. Calyx of poison gland *ca.* 2.3 times as long as wide, situated in the distal half of trochanteroprefemur.

Leg-bearing segments (Fig. 14G). Tergite 1 wider than metatergite 2; lateral margins converging backward. Metasternites sub-rectangular; without a deeply mid-longitudinal sulcus. Posterior pair of sub-ovoid pore-fields present in all metasternites from 1 to penultimate. Pore-fields present also on all procoxae and metacoxae from 1 to penultimate. Legs 1 smaller than the others; pretarsus claw-like, reaching *ca.* 1/5 of the length of the tarsus.

Ultimate leg-bearing segment (Fig. 14H–K). Pretergite and intercalary pleurites separated by distinct sulcus; pretergite *ca.* 2.3–3.0(♀), 3.3–3.5(♂) times as wide as long on exposed part. Metatergite *ca.* 1.2–1.3(♀), 1.3(♂) times as wide as long; shield-shaped. Metasternite sub-trapezoid to sub-cordiform; *ca.* 1.3(♂), 1.6(♀) times as wide as long; lateral margins slightly concave to nearly straight, strongly narrowing backwards; posterior margin *ca.* 0.2 times as wide as anterior margin; with sparse setae of various sizes. Coxal pores 10–13(♀), 8–9(♂) on each coxopleuron; opening nearly congruently; all coxal pores distinctly aggregated close to the lateral margins of the metasternite and some of them covered by that; diameter of the coxal pores similar to that of the respective ducts; male setae slightly denser close to the ventral posterior edge of the coxopleuron, female sparse. Ultimate leg *ca.* 0.9 times as long as penultimate leg, male distinctly swollen, ventral and lateral sides with very dense setae, female sparse. Ultimate pretarsus a claw; *ca.* 0.2(♂), 0.3(♀) times as long as tarsus.

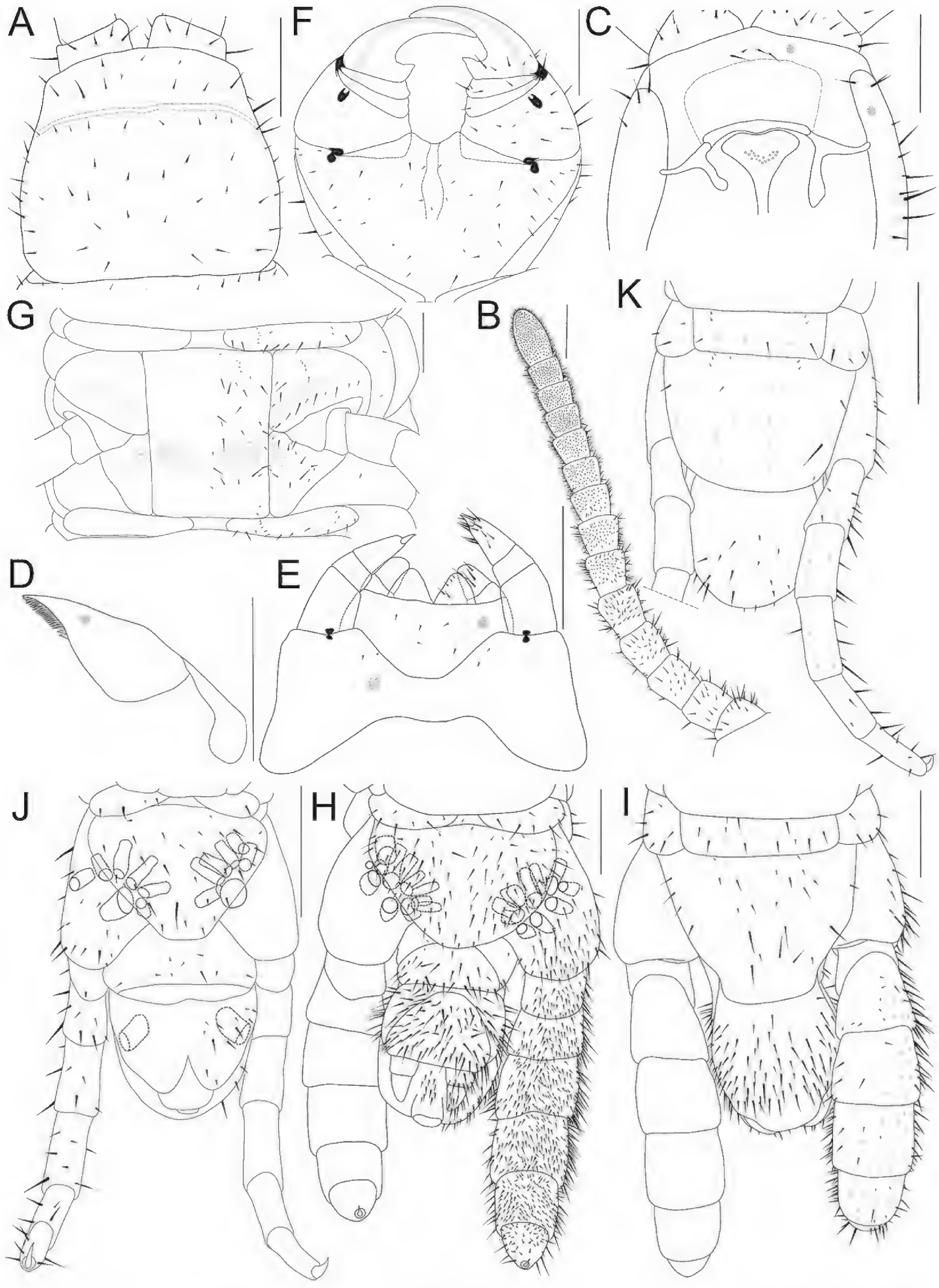

Figure 14. *Strigamia ziyunensis* sp. nov. **A.** Cephalic plate, dorsal; **B.** Left antenna, ventral; **C.** Anterior part of cephalic capsule, ventral (forcipules, maxillae and mandibles removed); **D.** Mandible; **E.** Maxillary complex, ventral (setae on right part omitted); **F.** Forcipular segment, ventral (venom canal drawn with dashed lines); **G.** Sternum of leg-bearing segment, ventral (setae on right part omitted); **H.** Posterior end of body in adult male, ventral (setae on right coxopleuron and ultimate leg omitted); **I.** Ditto, dorsal (setae on left coxopleuron and ultimate leg omitted); **J.** Posterior end of body in adult female, ventral (setae on left coxopleuron and ultimate leg omitted); **K.** Ditto, dorsal (legs partially omitted). Areolation drawn in part in **C–E**. Specimens: **A–I**, holotype; other material (**I–J**), ♀ (CMMI 20231221005D). Scale bars: 250 μm.

Postpedal segments (Fig. 14H, J). Male: intermediate sternite distinct and exposed; first genital sternite separated from pleurites by distinct sutures; gonopods bi-articulate, with setae; penis conical; anal pores present. Female: intermediate sternite indistinct, medially not exposed; first genital pleurosternite *ca.* 3.2–4.8 times as wide as long, posterior margin slightly concave, uniformly with sparse setae; gonopods lamina not distinctly bilobate, with sparse setae; anal pores indistinct.

Etymology. Latin: *ziyunensis* = Ziyun. The specific epithet refers to its type locality Ziyun Miao and Bouyei Autonomous County. We suggest the Chinese common name as "紫云地蜈蚣".

Remarks. This new species resembles *S. svenhedini* (Verhoeff, 1933) in its coxal pore distribution; the coxal pores cluster into a single group on the metasternite of the ultimate leg-bearing segment. However, *S. svenhedini* (Verhoeff, 1933) has the largest number of posterior coxal pores on each coxopleuron, which are distinctly displaced from all other pores (Verhoeff 1933: fig. 16), allowing it to be distinguished from *S. ziyunensis* sp. nov.

Distribution. China (Guizhou Province).

Discussion

The genus *Strigamia* has a Holarctic distribution pattern, primarily occupying temperate zones with southern extensions into the Indochinese subregion (Bonato et al. 2011, 2012). Among the 54 currently recognised species, 47 were originally described in the well-explored areas of Europe, North America, and Japan, whereas East Asian representatives have remained poorly studied (Bonato et al. 2017). Our systematic field surveys revealed 13 species on the East Asian mainland, including 7 new taxa. Furthermore, we included two species known from the literature to be distributed throughout the East Asian mainland. This finding not only confirms the total species count but also points to a significant potential for future discoveries.

To define the new species, we prioritised whether the pleuropretergite was divided into characteristics for initial classification and subsequently refined the distinctions using body length, number of leg-bearing segments, number and length of setae, morphology of the forcipular tarsungulum and its basal denticle, location and morphology of the poison gland calyx, number and arrangement

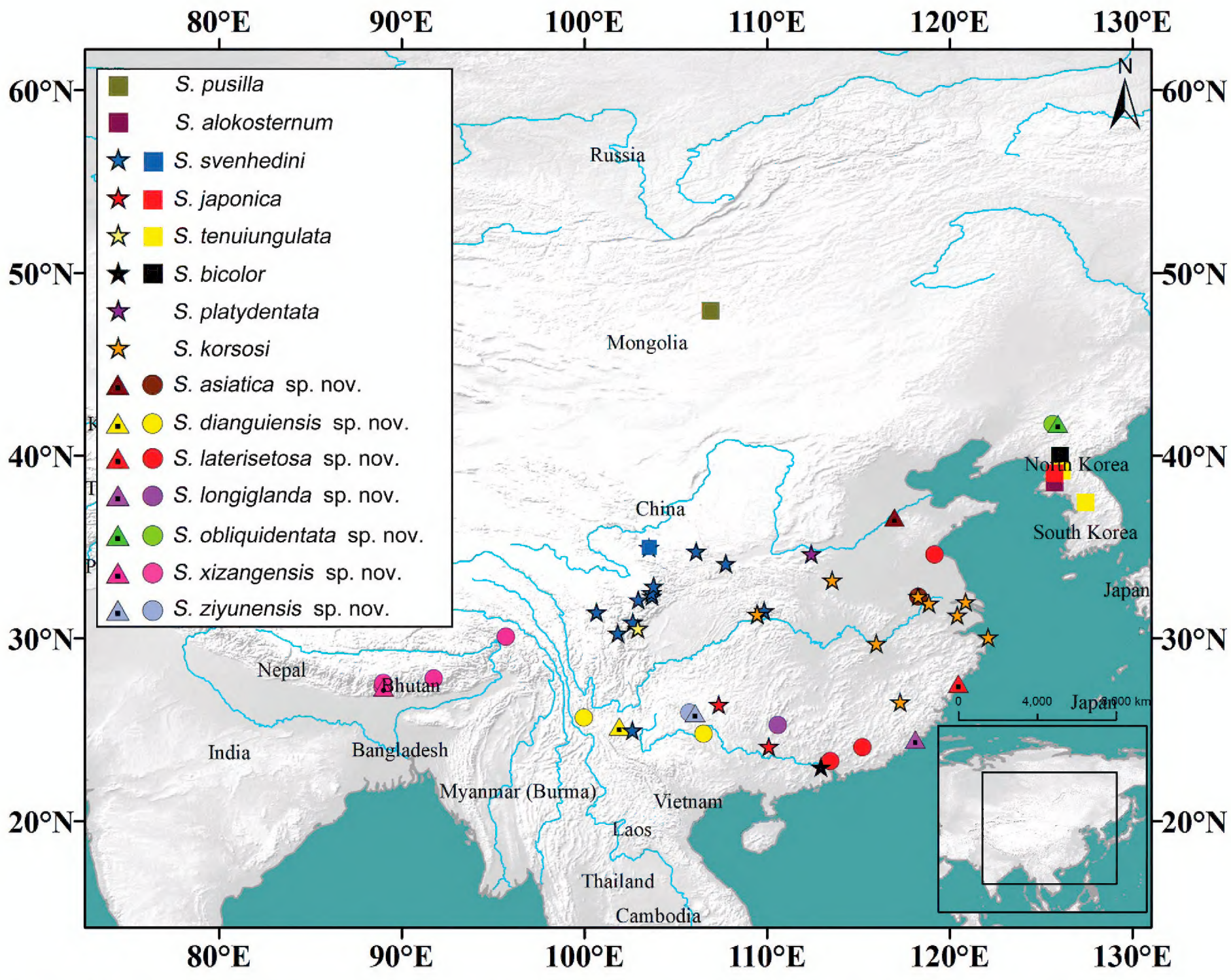

Figure 15. Localities of *Strigamia* in East Asian mainland. Triangles represent type localities. Squares represent distribution records based on documented areas in the literature.

of coxal pores on the coxopleuron, and degree of emargination on the anterior margin of the second maxillae coxosternite. We considered whether the pleuropretergite was divided, and the number and length of setae, the morphology of the forcipular tarsungulum and its basal denticle, and the number and arrangement of coxal pores on the coxopleuron as diagnostic markers for species-level differentiation. However, body length, the number of leg-bearing segments, location, and morphology of the calyx of the poison gland exhibited intraspecific variation, but remained informative and may serve as supplementary diagnostic support.

We further propose that the number and arrangement of coxal pores change during development. Examination of the specimens revealed that the coxal pore patterns in juvenile *Strigamia korsosi* Bonato, Bortolin, Drago, Orlando, Dányi, 2017 and *Strigamia svenhedini* (Verhoeff, 1933) differed markedly from those of adults. Juveniles of *S. korsosi* possess a single large coxal pore, resembling *Strigamia monoporus* (Takakuwa, 1940), whereas adults develop two pairs of clustered pores. Juveniles of *S. svenhedini* exhibited 4–5 pores arranged similarly to those in *Strigamia nana* Bonato, Bortolin, Drago, Orlando, Dányi, 2017, whereas adults possessed 10–12 pores, with the majority clustered along the lateral margins of the metasternite and 1 pore distinctly separated from the others.

Species of the genus *Strigamia* have a broader dispersal capability compared with those of other genera (*Malochora* Chamberlin, 1941; *Javaenia* Chamberlin, 1944; *Agathothus* Bollman, 1893 and *Chileana* Özdikmen, 2009) within the subfamily Linotaeniinae Cook, 1899. The genus *Strigamia* is distributed across the Holarctic region and extends into the Indochinese subregion (Bonato et al. 2011, 2012). In contrast, *Malochora* and *Agathothus* are only known to have been recorded in the United States (Chamberlin 1941; Attems 1929), *Javaenia* is restricted to Indonesia (Chamberlin 1944), *Chileana* is endemic to Chile (Silvestri 1899; Özdikmen 2009), and most *Strigamia* species exhibit restricted distribution ranges to the East Asian mainland, except for *S. svenhedini* and *S. korsosi*, which have broader ecological tolerance; the former occupies multiple southwestern areas, whereas the latter is distributed across eastern and central China (Fig. 15). Biogeographic analyses based on voucher specimens and historical records identified key distribution extremes: northernmost in Mongolia (*S. pusilla* (Sseliwanoff, 1884)), easternmost in South Korea (*S. tenuiungulata* (Takakuwa, 1938)), southernmost in Guangdong Province (*S. bicolor* Shinohara, 1981), and westernmost in the Xizang Autonomous Region (*S. xizangensis* sp. nov.). Elevational records revealed remarkable adaptability, ranging from near-coastal populations of *S. korsosi* at 30 m to high-altitude populations of *S. svenhedini* at 3890 m. The extensive geographic distribution of *Strigamia* across the East Asian mainland strongly indicates a substantial underestimation of species diversity within this genus, particularly along elevational gradients and biogeographic transition zones.

A key to species of the genus *Strigamia* known from East Asian mainland

1 Pretergite and intercalary pleurites of the ultimate leg-bearing segment comprising a singular, undivided pleuropretergite (Fig. 8I) ..... *S. asiatica* sp. nov.
– Pretergite and intercalary pleurites of the ultimate leg-bearing segment separated by distinct sulcus 2
2 Basal denticle of forcipular tarsungulum forms an angle of approximately 90 degrees with internal margin (Fig. 12F) ..... *S. obliquidentata* sp. nov.
– Basal denticle of forcipular tarsungulum forms an angle of less than 90 degrees with internal margin 3
3 Internal and external margins of the forcipular tarsungulum subparallel along the basal part, gradually converging only along the distal part (Bonato et al. 2012: fig. 14; Fig. 4F) 4
– Internal and external margins of the forcipular tarsungulum gradually converging all along the tarsungulum 5
4 Average number of leg pairs more than 50 (Takakuwa 1940: fig. 141) ..... *S. alokosternum*
– Average number of leg pairs less than 50 ..... *S. tenuiungulata*
5 Coxal pores scattered on most part of the ventral side of the coxopleura, only slightly denser close to the metasternite 6
– All coxal pores distinctly aggregated close to the lateral margins of the metasternite, with the possible exception of a single pore on each coxopleuron 11
6 Basal denticle of the forcipular tarsungulum is large parallelogram-form (Shinohara 1981: fig. 3; Fig. 6F) ..... *S. platydentata*
– Basal denticle of the forcipular tarsungulum with a triangular profile 7
7 Coxosternite of first maxillae entire 8
– Coxosternite of first maxillae with a median sulcus (Dányi 2006: fig 1d) ..... *S. pusilla*
8 Calyx of the poison gland elongated, situated from femur to distal half of trochanteroprefemur (Fig. 11F) ..... *S. longiglanda* sp. nov.
– Calyx of the poison gland non-elongated, situated in the distal half of trochanteroprefemur 9
9 Anterior margin of the second maxillae coxosternite nearly straight (Fig. 13E) ..... *S. xizangensis* sp. nov.
– Anterior margin of the second maxillae coxosternite concave 10

10 The number of coxal pores on each coxopleuron more than 20 (Takakuwa 1938: fig. 9; 1940: fig. 138; Fig. 3H, J) ..... *S. japonica*
– The number of coxal pores on each coxopleuron less than 20 (Shinohara 1981: fig. 13, 14; Bonato et al. 2012: fig. 6; Fig. 5H)..... *S. bicolor*
11 The most posterior coxal pore on each coxopleuron distinctly displaced from all other pores..... 12
– Coxal pore on each coxopleuron mostly clustered with other pores..... 14
12 Cephalic pleurite with sparse setae and slightly denser close to the ventral posterior edge (Fig. 10C) ..... *S. laterisetosa* sp. nov.
– Cephalic pleurite without setae..... 13
13 Metasternites with dense setae of various sizes (Fig. 9G)..... *S. dianguiensis* sp. nov.
– Metasternites with few small setae (Verhoeff 1933: fig. 16; Fig. 2G)..... *S. svenhedini*
14 Coxal pore fields are subdivided into two groups, each of them inside an indistinct common pit (Bonato et al. 2017: Appendix S1. fig. 2G, J; Fig. 7H, J) ..... *S. korsosi*
– Coxal pore fields are grouped within an indistinct common depression (Fig. 14H, J)..... *S. ziyunensis* sp. nov.

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

Funding

The research was supported by the CACMS Innovation Fund (nos. CI2024E003), the Key Project at Central Government Level: the Ability Establishment of Sustainable Use for Valuable Chinese Medicine Resources (nos. 2060302), and the Central Government Guides Local Science and Technology Development Fund Projects (grant nos. 246Z4204G).

Acknowledgements

We sincerely thank Dr. Lucio Bonato and the anonymous reviewer for their constructive comments and valuable suggestions on the manuscript, which have significantly contributed to improving its quality. The author Chao Jiang wishes to thank Mr. Weichun Li (Jiangxi Agricultural University, China) for his help in the organization of field trips to Xizang.

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